

AUTOSPORT

BRITAIN'S MOTOR SPORTING WEEKLY

F1 survey—Fittipaldi profile—clubmen's cars



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AUTOSPORT

BRITAIN'S MOTOR SPORTING WEEKLY

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editorial

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F1 PROSPECTS

AS Patrick McNally says in the introduction to his annual survey on Formula 1 racing, this has indeed been a vintage year for the formula. With the exception of the domination by the new World Champion, especially during the first half of the season, the racing has been as close as it has ever been. The three main reasons for the closeness of the competition may, it is true, be said to have detracted a little from the driver and technical interest. First, the regular 1969 F1 circus did not include one absolutely new face among the drivers; second, there was only one entirely new chassis, and this from an established F1 constructor; and third, all the race winners were powered by Ford.

At least two of these factors will be changed in 1970. There will be some new faces: Australian Tim Schenken, Swede Ronnie Peterson and Canadian George Eaton are almost certainly to have team drives next year, and there are strong suggestions that other new boys will get 1970 F1 drives. The reason behind the lack of new chassis last year was that the development of four-wheel-drive cars was upmost in the plans of the constructors, but for 1970 Lotus, Ferrari, McLaren and Brabham have already announced new cars, and a new chassis from BRM, at least, is sure to follow, although the Matra plans are as yet unknown; the 4wd cars from McLaren, Matra, Lotus and Cosworth are by no means discarded yet, and in addition there will be two brand new F1 constructors, March and De Tomaso. Cosworth engines are almost bound to be overwhelmingly predominant again next year, but Matra will join the non-Ford ranks of Ferrari, who will be using the new flat-12, and BRM.

The 3-litre formula may have already gone from strength to strength, but if 1969 was a vintage year, 1970 has surely got to be the best yet. Technical know-how gained during four years in the formula, which has not reached its peak even yet, will be applied to the new cars, and with new drivers as well, next year's promises to be a really first-class Grand Prix season.

our cover picture

Active scene in the Matra International camp as work goes on to ready the one MS80 and the 4wd MS84 prior to the British GP, with this year's most successful team manager Ken Tyrrell supervising. Our Formula 1 Seasonal Survey starts on page 24.

Photo: Peter Burn

Surtees goes it alone for F1 Rodriguez for BRM and JW BRM for CanAm

TS5 F1 car likely

John Surtees has definitely decided not to sign for BRM for 1970. In an official announcement this week, he said he had taken the decision after several meetings with Louis Stanley; although useful groundwork had been achieved during 1969 which could pay off in 1970, he said, "Such are the rigours of modern Grand Prix racing that I do not feel I should continue either as a driver or an individual under the pressures which have arisen during the 1969 season with the BRM organisation."

It has only recently been revealed that poor Surtees, who had been complaining of bouts of flu and bronchitis, has been suffering for the whole of the latter part of the season from pneumonia, and he is currently under doctor's orders not to get into a racing car; this week he is going to hospital for a full checkup.

Meanwhile he has, as has been rumoured, bought from McLaren's M7C, the F5000-monocoque car raced for most of this year by Bruce McLaren; but he told us last week that as yet no decision had been taken as to whether he would do Formula 1 races with it, for initially its official purpose was tyre-testing. However, it would naturally be logical for John to race the M7C in early 1970 Grands Prix while developing a Formula 1 version of the TS5 for later in the season, but such a programme involves a big budget and lots of time. The Formula A/5000 side of Team Surtees' activities is currently so busy that John says he is loth to disturb it.

The new factory in Edenbridge is in full swing, and 15 firm orders for TS5As have been taken from America. At least two works cars will be run, one in Europe and one in America, and David Hobbs and Trevor Taylor have definitely signed to drive them, while Andrea de Adamich may also be with the team again in 1970. The TS5A has new front and rear suspension, better brakes, modified fuel and oil systems, stronger chassis, different aerofoils

and various other improvements.

With John Surtees finally taking the difficult decision not to re-sign for BRM, there has been a reorganisation of the Bourne concern. A new board has been set up: Sir Alfred Owen is chairman with Jean and Louis Stanley Joint Managing Directors; the other members are William Holmes, the Group Sales Director, Raymond Mays, Peter Spear and James Sandcombe (secretary). Tim Parnell will continue as works and team manager, with Aubrey Woods and Tony Southgate in charge of engineering and development.

Pedro Rodriguez has signed as number one driver for the team; he is also expected to sign for the JW-Gulf-Porsche team for sports car racing. Jack Oliver will be number two, and the surprise announcement is that BRM intend to field a third car for the young Canadian George Eaton.

Another surprise announcement is that BRM will be entering the CanAm series for 1970. They have not, as yet, given any details of their vehicles. However, there was talk as long ago as last autumn of a Rolls-Royce-powered BRM for the CanAm series. . . .

JW test at Daytona

JW Automotive recently flew one of the Gulf-Porsche 917s out to Daytona for testing, and a measure of how well-sorted the infamous flat-12 beasts are becoming under the Wyer/Yorke/Horsman organisation can be gained from the fact that Jo Siffert's best lap was 1 m 47 s, which is something like 7 secs faster than the existing record!

The long-tailed bodywork has been replaced by something more like that of the CanAm car, which has made the 917 much more stable; with the long tail in position the car proved to be fractionally faster down the straight—but 8 secs a lap slower overall, as the car kept wanting to behave like an aeroplane on fast corners. David



John Wyer receives the Ferodo Trophy from Ferodo's Managing Director, E. R. Pochin. See story "Wyer honoured again."

Hobbs and Pedro Rodriguez also took part in the testing.

Although no official announcement of the Gulf-Porsche drivers has yet been made, it now appears that Amon will be much too busy in F1 and CanAm and will not be joining the team. Thus heading the list will be the sports-car pair of 1969, Jo Siffert and Brian Redman. A big surprise is that Pedro Rodriguez has almost certainly been signed as one of the drivers of the other car, which only leaves one seat vacant. 'Tis said that John Surtees is one of the drivers who has been offered it. Vic Elford, along with Kurt Ahrens, will be busy with the Porsche Salzburg team, run by the Austrian distributor.

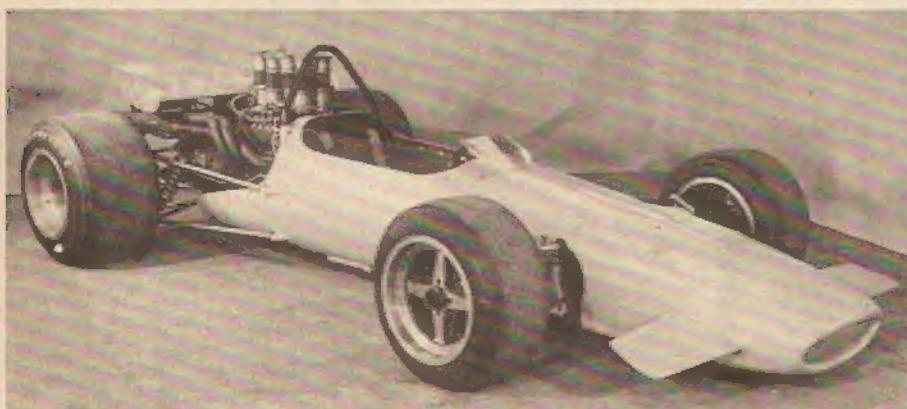
Wyer honoured again

At the Dorchester Hotel last week John Wyer was awarded the Ferodo Trophy, one of motor-racing's premier awards, which is given annually to "The Commonwealth's most outstanding contribution to motor racing." Wyer's organisation, JW Automotive, were of course responsible for a second win on the trot at Le Mans this year against the might of the German Porsches. Wyer, in a typically modest speech, mentioned all the other people in his organisation who worked so hard in a team effort to produce the victories.

The award panel this year comprised Lord Strathcarron, Tony Brooks, Philip Turner, Hon Gerald Lascelles, Nick Syrett, Innes Ireland, Stirling Moss, Peter Garnier and Bill Jupe of Ferodo. Present at the ceremony were a galaxy of motor racing personalities and drivers. Past winners of the Trophy, which was first awarded in 1953, have included Bruce McLaren, Keith Duckworth, Jack Brabham, Colin Chapman, Jim Clark, Sir Alfred Owen, Rob Walker, Dunlop, Coventry Climax, Tony Vandervell, Connaught and Jaguar.

Sports Car Show

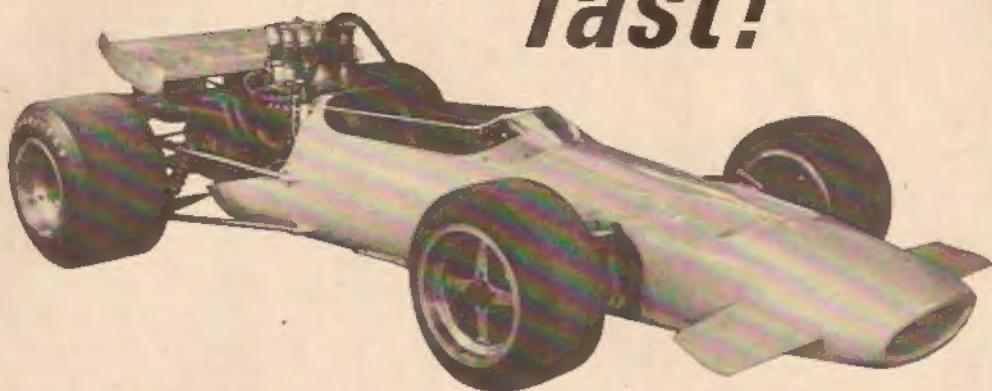
Brief preliminary details have been announced by the BRSCC of their 1970 exhibition which alternates with the Racing Car Show. This venture will be for sports and GT cars with a full supporting cast of high performance accessories. Presented by the Daily Mail, the show will run from January 7 to 17 at the Old Horticultural Hall in Westminster, which was the scene of the very first Racing Car Show in 1960. Admission will be from 10 am to 9 pm and the general price will be 4s.



This is the prototype of the new FA/5000 McLaren M10B, which Bruce McLaren was testing at Goodwood last week (see Pit & Paddock and From the Cockpit last week), and which will be put into production by Trojan for 1970.

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The 1970 version of Bruce McLaren's European championship winning Formula 5000 is now in full production at the Croydon works of TROJAN LIMITED.

The M.10B as the latest car is known, is packed with race proved modifications developed on the Formula One cars. These include re-designed front and rear suspension incorporating low offset 11" wide front wheels and 16" wide rear wheels. The nose section of the body has been restyled and now accommodates a new aluminium radiator. Lockheed Formula One type brakes are fitted with curved vane ventilated discs.

The gearbox for 1970 is the Hewland DG 300 which apart from saving weight provides a more positive gear shift. The monocoque chassis has been lightened and modified to accept easy installations of a dry sump engine. Further original fitments include S.C.C.A. approved fuel cells—full seat harness—front spoilers and rear aerofoil. Optional extras are dry sump oil tank—exhaust headers—and "System 1" fire extinguishing system using DuPont Freon 1301 gas.

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MCD and championships . . .

Motor Circuit Developments have already completed negotiations for the sponsorship of seven of next year's club racing championships, which will be held on all the Grovewood circuits, and also at Mondello Park and Castle Combe. The types of racing covered are Formula 3, *formule libre*, Formula Ford, FF100, mod sports cars, saloons and GTs. A minimum of £100 prize money will be paid for each of 140 or so championship races, giving a total prize fund of nearly £15,000. MCD have also taken the wise step of differentiating between championship round-endowed type meetings and pure club ones.

Les Leston sponsors more FF

After a successful first season as sponsor of the leading British Formula Ford championship, Les Leston has announced that the Leston FF title will continue in 1970, when it will take the form of a 23-race series with rounds at Brands Hatch, Mallory Park, Oulton Park, Castle Combe, Thruxton, Snetterton, Silverstone and Mondello Park. The best 15 scores for each driver will count towards the championship, and £4 per point scored (on the 9-6-4-3-2-1 basis) will be paid throughout the series. This will entail a prize fund of £2,300, with an additional £100 for the winner, £75 for second place and £50 for third. The qualifying rounds will be as follows:

March 15, Snetterton; 27, Snetterton; 30, Castle Combe; April 18, Oulton Park; May 3, Brands Hatch; 9, Castle Combe; 24, Brands Hatch; 25, Castle Combe; June 7, Brands Hatch; 14, Thruxton; 22, Mallory Park; July 4, Oulton Park; 26, Snetterton; August 2, Brands Hatch; 26, Silverstone; 31, Mallory Park; September 13, Brands Hatch; 26, Oulton Park; October 4, Mondello Park; 17, Oulton Park; 18, Mallory Park; November 15, Brands Hatch; December 27, Brands Hatch.

MCD and Mondello

At a press reception in Dublin on November 26, details were announced of a new tie-up between Motor Circuit Developments and Mondello Park. Racing man Eddie Regan is now no longer involved with Mondello, and the new Board of Directors includes John Webb, Stuart Cosgrave, Jim Morrin, Tom Kelly and John Weaver.

As a result of the new tie-up, all next year's Mondello meetings will be qualifying

rounds of the various MCD championships, with one round featured per meeting for F5000 or F3 or *FLibre* or FFord or F100, or saloons or prod sports or GTs. This is intended to give a more varied programme than ever before, and greater financial assistance will be made available to English drivers competing at Mondello. It is not intended to increase the length of the existing 1.24 miles circuit, but it is proposed to make several improvements.

Toyota for CanAm

Toyota, whose 5-litre Group 6 car recently defeated several of the leading American CanAm cars in the CanJapAm, are planning to do a full CanAm season next year with a developed version of their 5-litre V8 G7 car. Nissan, whose 6-litre V12 sports-racers have been proving very quick, are also said to be contemplating doing a CanAm season.

Sunday Brands

The final round of the Courage-Kent Messenger *formule libre* championship will be the feature of the Mini-7 C's Brands Hatch meeting on Sunday. Tony Lanfranchi heads the entry with the FB Royale and faces opposition from the F3 Brabhams of Keith Jupp, Colin Crang, John Kendall and Alan McCullay, and Fred Saunders in his Austro Vee. Other races cater for Formula Fords, prod sports and saloons. First race is at 12.45 pm.

Briefly . . .

● Matra's two-car team for the Temporada series will comprise a 630/650 and a 650 V12, and the regular drivers Jean-Pierre Beltoise, Johnny Servoz-Gavin and Henri Pescarolo, will be joined for the two-race series by Argentinian Andrea Vianini. Another addition to the entry list will be a Ford GT40 for local driver Pablo Brea, who made a brief appearance in British racing earlier this year with an F3 Merlin 14A.

● NASCAR driver LeeRoy Yarbrough was named Man of the Year at the Ford Motor Company's recent dinner in America.



Snow has hit many parts of the country early this year, and this was the scene which greeted those enthusiasts who arrived at Brands Hatch for the Les Leston Formula Ford championship final, which was naturally cancelled.

- Considerable work has been going on in Milan where Autodelta are preparing themselves for the new season, and trying to get their T33-3s really right for the Temporada series. The 1970 car, which is due to be driven at Daytona after the South American series, is reported to be lower and much more squat, better aerodynamically and lighter, with 425 bhp. Piers Courage and Andrea de Adamich will be the number one pairing.
- American Mike Goth, who used a TS5 in Formula A Continental Championship events this season, is one of the first to put in an order for one of the new TS5As. He will keep his 1969 TS5 as a spare car.
- Alec Poole is now out of hospital and looking fit again after an operation to cure a blocked intestine, a result of his accident at Brands Hatch in October. The British Saloon Car Champion will be going with Roger Clark on the World Cup Rally in a works Ford Escort, and may be driving for Ford in next year's Gallaher Circuit of Ireland Rally, and also possibly in saloon racing.
- Now that he has fully recovered from his untimely road accident earlier this year, and has been putting up some very good drives in Mark Konig's Nomad-BRM Mk 2 G6 car, Tony Lanfranchi has hopes to do a full season of Formula 5000 next year, possibly with a Lola T190. He is at present seeking a sponsor.
- Following Emerson Fittipaldi's success under the Jim Russell banner in Formula 3 this year, Russell, in addition to his Formula 2 car for the Brazilian, will be running a two-car F3 team of Lotus 59s for two more Brazilians—Emerson's brother Wilson, who is 25, and Jose Pace, a leading Brazilian sports car pilot. Argentinian Pablo Brea hopes to resume F3 next year, after a rather unhappy time with a Merlin Mk 14A, while Luiz Bueno is another likely candidate for F3 in 1970, after his FF Merlin drives of this year.
- Lingard Goulding, who raced a 1.6 Lotus-Ford 27 t/c in early 1966, and has also raced a 1.5 Lotus 18 and a TVR Vixen, has bought the ex-Epstein-Cuthbert Formula 5000 Lola-Chevrolet T142, as driven by Mike Hailwood earlier in the year.



An unusual sight at Fort Dunlop's test track was this Formula 1 BRM, which was being used for tyre testing. On the bottom left of the picture can be seen the glass-plate section of the track under which a camera takes photographs of the tyre.



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● Bearded Dick Barker, more commonly known as "Desperate Dick," will be making a big bid in Formula 3 next year with a Brabham BT28, which he has acquired from Mike Stow. The BT28, which was raced successfully by David Cole once or twice, will be shared with Bob Adcock, who earlier this year ran the ex-Dave Walker FF Alexis Mk 14. Barker, of course, is well-known for his performances with a Lotus 51 in 1968, and this year for many wins with another FF, an Alexis Mk 15. Barker briefly had an F3 Alexis Mk 17, but he did not have a competitive engine.

● A German motoring magazine recently published some fascinating performance figures of a Formula 1 car in action, although regrettably they did not specify what car they took their data from. The acceleration figures given were 0-50 mph in 2.64 secs, 0-100 mph in 6.46 secs and 0-150 mph in 10.10 secs.

● Former Team Clio Matra MS5 F3 driver Phillippe Vidal, who returned to F3 briefly this year with a Tecno, has retired from racing and sold the car to this year's works F3 GRAC MT8A driver Jean Max.

● Latest recruit for the forthcoming Temporada sports car series is Frenchman Jacques Rey, who will be sharing his newly-acquired Lola-Chevrolet T70 Mk 3B with Swiss Edgar Berney. He plans to do all the major G4/6 races of 1970 with the Lola.

● Alfa Romeo have recently been giving test drives to a number of promising Italians, and among those who were trying a 1300 GTA were world motorcycle champion Giacomo Agostini, Italian F3 champion Gian-Luigi Picchi, and F3 star Claudio Francisci.

● A tremendous number of Formula Ford drivers were at the Royal Lancaster Hotel last week for Formula Ford International's first dinner-dance and awards presentation. European Formula Ford Champion Gerry Birrell received his spoils, which included a new Cortina GT, and Nick Brittan, aided by Walter Hayes, Les Leston and others, proved an able master of ceremonies.

● Eddie Regan, one of the men who built Mondello, has an ultra lightweight 1.3 Cooper S, but he may well be racing an Escort-FVA next year. Stee Griffin is building a similar lightweight shell for his 1.3 Smarties Cooper S. Vinney Moy hopes to replace his Anglia with an Escort, but with a twin cam engine and not an FVA.

● It is rumoured that the Russians are building a vehicle to tackle the land speed record. Apparently the new car will be remote-controlled, and will use an unspecified number of 500 bhp gas turbine engines in a 33 foot long chassis.

● Former Team Tecno France driver Bernard Plaisance, who ran in Formula 3 at the beginning of the year as team-mate to Jean-Pierre Jaussaud, will be continuing in Formula 3 next season, again with a new Tecno. However, as the Italians will be building F3 engines to the 1971 1600 cc F3 formula in 1970, he will be changing from Novamotor power to either Holbay or Lucas.

● Although Lotus issued a statement last week saying that the penny-farthing loaned to them for their dinner-dance had been stolen, the bicycle has apparently been in safe hands ever since the event.

● As a result of Chris Boulter's success in clinching this year's Freddie Dixon production sports championship outright with his Marcos-Volvo, Marcos Cars are offering selected customers some special body/chassis units for the 1970 racing season. The idea is to keep the cost of building a 3-litre Marcos prod sports racer to a minimum, and so for £480 with laminated screen, the car can be bought minus all the usual trim.

STOP PRESS

Mike de Udy and Frank Gardner repeated their Capetown success by winning the third round of the Springbok series, the Laurence Marques Three Hours in Mozambique last Sunday. The Lola-Chevrolet T70 Mk 3B was 20 secs clear of Dick Attwood in the Mirage. Full report next week.

● Des Donnelly is selling his ex-Brian Chatfield Downton-built 1.3 Mini-Cooper S and will be racing the ex-Gerry Marshall special Vauxhall Viva GT.

● Serge Asiosmanoff, constructor of the French GRAC Formula 3 and Formule France GRACs, has announced his 1970 FF car, which will be known as the MT10. He has announced no definite plans for F3, but it seems likely that he will run at least one F3 car, probably for FF GRAC star Denis Dayan.

● Manfred Mohr, who has done hardly any racing since his very nasty shunt in his Tecno at Brands Hatch in October 1968, when he broke both his legs, plans to do a full season of European Touring Car Championship events in 1970 with a 2.6-litre Ford Capri.

● Steve Neal, who became well-known for his driving of the Equipe Arden Mini-Cooper S and this year drove a Britax-Cooper-Downton car, may be driving a Formula Ford next year.

● Austrian Lothar Schörg, who used to drive Formula Vees, has purchased the ex-Helmut Marko F3 McNamara-Holbay Mk 3. Marko, the Austrian who showed great promise with this F3 car and various

DIARY

INTERNATIONAL EVENTS

December 24. Pietermaritzburg Three Hours, Roy Hesketh, South Africa (G4, G6, G7 Springbok series, round 4).

BRITISH CLUB EVENTS

December 6. TEAC national British rallycross (Wills rallycross championship, round 3), Lydden Hill, near Dover, Kent, 1 pm.

December 6/7. Oxford University MDC restricted 15th Targa Rusticana (MN Rally Championship final round), Prynne's Service Station, Garth, Bulith Wells, 14/1/979505, 10 pm.

Cardiff Colleges MC restricted Moonstrike 69 rally, R. J. Brown's Garage, Treforest Industrial Estate, 154/112860, 11 pm.

Rhyl & DMC restricted Slates Trophy rally, Slates Garage, Abergale, 108/943776, 11 pm.

Newcastle & DMC restricted Eshott rally, Patterson's Garage, Ponteland, Northumberland, 18/165728, 11.30 pm.

North Devon MC restricted Ilfracombe rally, Taw Garages, Barnstaple, 163/562327, 10 pm.

Charnwood CC restricted Charnwood rally, Beardell Estate, 112/581365, 11 pm.

Weekend Steering Wheel League (Bristol) Closed Hedgehog rally, Patchway Motor Co, 136/604806, 8 pm.

December 7. TEAC restricted rallycross, Lydden Hill, near Dover, Kent, 1 pm.

Mini Seven Club restricted Longbridge Car race meeting, Brands Hatch, Fawkham, near Dartford, Kent, 11.45 pm.

Blackpalfrey MC closed Maraworth stage, Maraworth, 171/643555, midnight.

West Hants & Dorset CC closed Christmas Cup Trial, Blandford Road, Corfe Mullen, Dorset, 10.30 pm.

750 MC (Dundee centre) closed Riverside Driving Tests, Riverside Drive, Dundee, 1.30 pm.

BMWs and Formula Vee cars, is probably going to join Abarth for G6 races.

● Ford have just completed arrangements under which complete 1300 GT engines can be purchased through their Industrial Product Dealers for use in Formula F100 racing cars for less than £80.

● STP-France will be backing the efforts of the diminutive Frenchman Jean-Pierre Cassegrain in Formula 3 next year. Cassegrain, who recovered from two very nasty shunts in a Brabham BT21 in 1968, drove a new Holbay-powered Brabham BT28 this year, his best result being a heat win at Rheims. For 1970 he plans to keep the Brabham. It is likely that there will be a second STP-France F3 car, although no final decision has yet been reached.

● At a dinner organised by Shell at the Grosvenor Hotel, Chester, last Friday the 1969 Shell/RAC Hillclimb Championship top ten were presented with their awards by Raymond Mays. Most of the drivers who gained championship points were present, together with representatives of the various organising clubs, and during the afternoon Shell's hillclimb representative Freddie Brown organised a free-for-all at which they were able to voice their feelings on improving the championship. Acting host Mr Victor Skone-Rees, Shell-Mex & BP's North-West Regional Manager, pledged Shell's support for the series in future years.



Two that got away: details and photos of both the Jomo (left) and the Hamlen (right) arrived too late for our Formula Ford Buyers' Guide last week. The Jomo Mk 4A, available from Jomo Mot & Racing, 506 Brook Lane, Kings Heath, Birmingham 13 (021-SPR-2018), costs £998 complete as a rolling chassis, the only extra being a safety harness. The Hamlen, built by Hamlen Engineering, West Street, Harrietsham, Kent (06274-571), is available from £700 as a rolling chassis without gearbox.



What winning rally cars are wearing this year



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Roger Clark

ROGER CLARK

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Rally Special

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Rally Special

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Six-cylinder silence and Volvo engineering

OF recent years the four-cylinder Volvo models have sold well because of their superb engineering, coupled with their reputation for long-lasting reliability. It seems a long time since Jo Bonnier first brought a Volvo to Silverstone, and after an energetic period of racing and rallies the car settled down with a reputation for being tougher than most. There are quieter and smoother four-cylinder cars, but none are better made.

The new six-cylinder Volvo is built to similar engineering standards. Indeed it uses many components of the 2-litre four-cylinder engine, including pistons and valves. The designers have taken no short cuts and there is plenty of water space

between all the cylinder bores, with a massive seven-bearing crankshaft. The block and head are both of cast iron, so the long engine is fairly heavy.

The wheelbase of the car has been increased from about 8ft 6 ins to 8ft 10 ins, but even so there is a considerably greater percentage of the weight on the front wheels, compared with the four-cylinder models. The straight-six is a delightful engine type in every way, but it does pose installation problems, and the manufacturers have avoided lengthening the front end too much for fear of loss of structural rigidity. The Volvo 164 has all the safety features that one expects with this make, and an elaborate system

of exhaust emission control is standard.

From the start it is obvious that this is a really splendid engine. Outstandingly smooth and silent, it has all the capacity for very high revs of its smaller brothers. It is in unit with an excellent four-speed gearbox, which is worthy of it, with light and precise changes and silent running. A divided propeller shaft prevents transmission vibration.

The test car had been fitted with a higher-gearred rear axle than is normal for overdrive models, having the 3.31 ratio of the automatic cars instead of the normal 3.73 to 1. This was a pity as it fractionally reduced the performance, especially in overdrive. However, a spectacularly fast



ROAD TEST
by John Bolster

Volvo 164



The big new Volvo 164 is in the chauffeur-driven class, but with the kind of performance to attract the master to the wheel.

39-23-2

0-60 mph time was recorded because this speed was brought just within the compass of second gear.

With this high gearing, the 164 was capable of 107 mph in direct top, but it would barely reach 100 mph in overdrive—less with adverse wind or gradient. However, it made third a splendid gear, which I used for miles on winding roads.

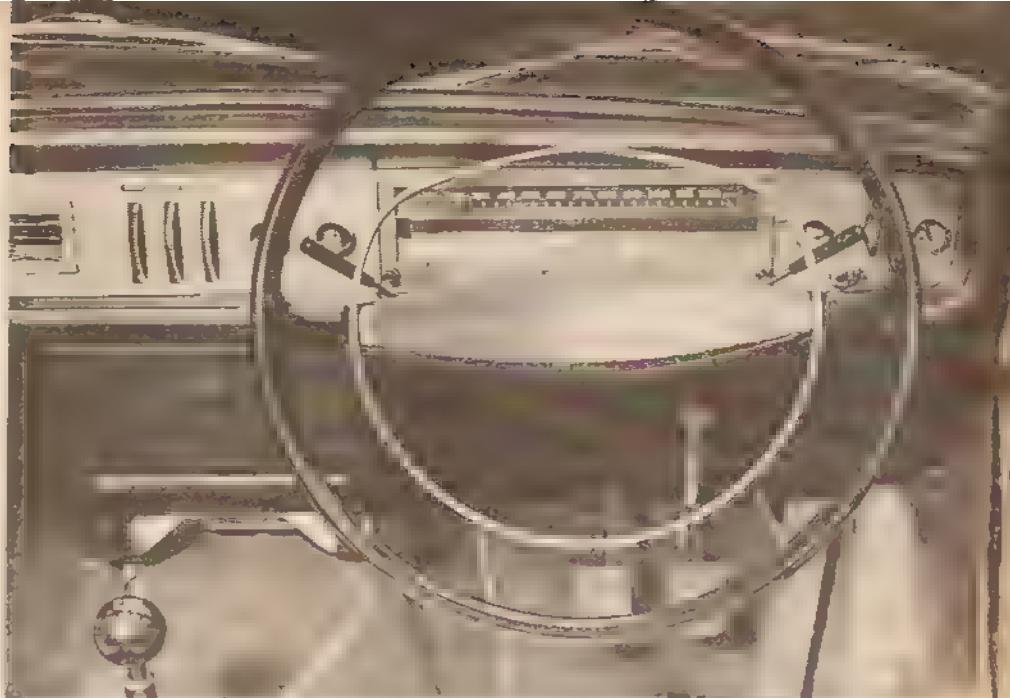
The chassis design follows Volvo traditions, with wishbones in front and a well-located rear axle on helical springs. The car tends to understeer, as would be expected from its weight distribution, but it swings through curves effortlessly at high speed and is outstandingly stable in gusty winds. It is a fast and untiring performer on motorways, but on winding and bumpy roads it seems to have rather a lot of suspension movement, appearing to roll a good deal and hop about somewhat when observed from outside, though it always feels controllable to the driver. Perhaps it is a more dignified and less sporting car than the four-cylinder Volvos, and it is consequently not such fun to drive hard.

The power-assisted steering is light even at parking speeds and gives the driver some feel on dry roads, but in the wet it is rather dead and the increased understeer must be watched. The turning circle of this large car is quite a bit smaller than that of the Mini, which is greatly appreciated during parking manoeuvres. The brakes have an elaborate duplicated operation system which renders failure impossible. They have good resistance to fading, but on the test car the front wheels sometimes tended to lock. The hand brake is very powerful, but it allows the car to run a few inches before stopping it, presumably due to a self-servo action of the shoes.

The 164 is quiet mechanically, and the excellent fit of the windows keeps wind noise to a minimum, so the bump-thump from the tyres is rather noticeable on bad roads. The seats are very comfortable, with the special Volvo control for varying the brake support, and the upholstery is beautifully done. The instrument panel is attractive, though I would prefer a round speedometer dial, and the battery of warning lamps covers most situations.

The heater is very efficient and begins working almost as soon as the car moves off, but it is rather astonishing that a new car can be introduced without any provision for adjustable face-level ventilation. The rear window has built-in heating wires with two settings, the stronger of which will deal with thick ice, and an illuminated switch knob reminds the driver not to leave it on unnecessarily. The luggage boot has a vast capacity, though it has a high sill over which suitcases must be lifted.

Many practical features will endear the car to its owner. Perhaps he will be a rather older man than the typical Volvo purchaser has been hitherto, and this big, dignified car is perfectly suited to chauffeur-driven occasions. Six-cylinder cars of about 3-litre capacity form a very popular class these days, and the all-round performance expected is pretty high. The 164 is a bit above the average in this respect, but it is also somewhat costly, which admirers of the marque will consider to be justified by the very high standard of construction. Above all, it will attract new clients to the Volvo fold who consider the previous models too unrefined. Far from being a sports car, this big machine will nevertheless put up an excellent average on long journeys, and it will not tire its occupants in doing it. This is a new kind of Volvo, but a logical development.



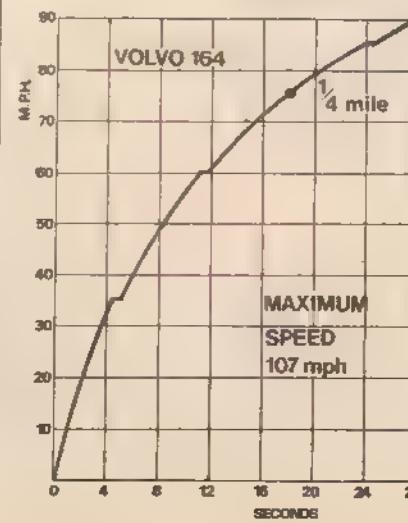
The interior lacks some of the assumed comforts of the present-day car, but nevertheless provides for a comfortable journey over long distances. 39-23-3



The new cast-iron, six-cylinder 3-litre engine is a direct development of the four-cylinder unit.

39-23-4

Specification and performance data



Car Tested: Volvo 164 four-door saloon, price with overdrive and power steering £2,045 including tax.
Engine: 5x cylinder, bore 88.9 mm x 80 mm, 2979 cc. Pushrod-operated overhead valves. Compression ratio 9.2 to 1. 145 bhp at 5500 rpm (gross), 130 bhp at 5000 rpm (net). Twin Zenith-Stromberg carburettors with special exhaust emulsion control system.

Transmission: Single dry plate diaphragm-spring clutch. 4-speed all-synchromesh gearbox with short central lever, ratios 1.00, 1.34, 1.97, and 3.14 to 1. Divided open propeller shaft. Hypoid rear axle, ratio on test car 3.31 to 1 (see text). Overdrive 0.797 to 1.

Chassis: Combined steel body and chassis. Independent front suspension by wishbones and helical springs with anti-roll bar. Worm and roller steering with power assistance. Rigid rear axle on twin trailing arms and Panhard rod with helical springs. Tie-rod dampers all round. Girling disc brakes round with servo assistance and dual operating circuit. Small supplementary rear drums for hand brake. Bore disc wheels, fitted 165 SR x 15 radial-ply tyres.

Equipment: 12-volt lighting and starting with alternator. Speedometer. Water temperature and fuel gauges. Heating, demisting and ventilation system. Two-speed windscreen wipers and washers. Flashing direction indicators. Reversing lights. Dimensions: Wheelbase 8ft 10 1/4 ins. Track 5ft 5 1/4 ins. Overall length 15ft 5 1/4 ins. Width 5ft 8 1/4 ins. Weight 1 ton 5 cwt 293s.

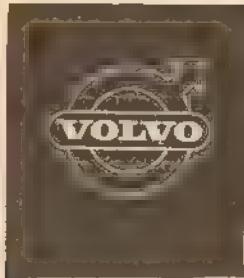
Performance: Maximum speed (direct top) 107 mph. Speeds in gears: overdrive 100 mph, third 85 mph, second 60 mph, first 35 mph. Standing quarter-mile 18.6 s. Acceleration: 0-30 mph, 3.7 s. 0-50 mph, 8.2 s. 0-60 mph, 10.4 s. 0-80 mph, 20 s. Fuel consumption: 21 to 24 mpg.

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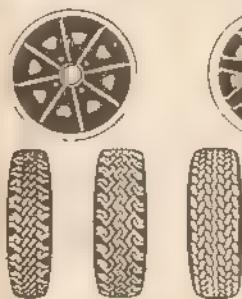
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correspondence

Rough deal at smooth Brands?

As a regular competitor at Brands Hatch, I feel that the time has come to put pen to paper concerning the state of the surface at various points around the circuit, in the hope that my letter achieves two aims: to arouse similar correspondence, and to catch the eye of one John Webb and create some action.

First, during a wet practice session on November 9 I found that my car, a 1000 cc Mini-Cooper, was sliding badly at points where it had no feasible reason to slide. My first reaction was that something was wrong with the handling of the car. I checked everything over in the paddock and even changed shock-absorbers.

However, when conferring with several other saloon competitors I found that their cars were behaving in much the same manner at exactly the same points, so I spoke to more competitors which together comprised every race on the programme—FF, prod sports, saloons and F3—and all were of the same opinion, that the resurfacing at Druids and Clearways is treacherous in the wet and none too good in the dry. The results speak for themselves.

During the course of the day's racing there were so many spins or shunts, or cars going agricultural, that I lost count, and when such experienced pilots as Bev Bond and Roy Pike gyrate, something is obviously wrong and could indeed lead to some very expensive and/or tragic shunts. For a further example, in the race in which I was competing Ron Mason, who must have competed in more races at Brands than anyone I know, spun eight times and hit the bank once (his information).

I was also told that the resurfacing was of an experimental nature, and one chap said jokingly that the resurfacing had been carried out to promote spectacular crashes for the benefit of the bloodthirsty spectator. I for one do not believe that any sane person could possibly dream of trying to create crashes, and I am sure that MCD would never do so. John Webb and his organisation have done a great deal to improve motor racing. So let's have a decent, safe surface on which to race—wet or dry.

LONDON NW7.

MAL KAY.

F2 and F5000

A LOT of people would agree with the sentiments expressed by Jochen Rindt at the BARC Annual Dinner and Dance on the popularity of Formula 2 (Pit and Paddock, November 13). Certainly the majority of people that I know within the sport are loud in praise of the formula. In addition, new manufacturers such as March continue to enter the field with new designs.

On the other hand, one must accept that Formula 5000 has survived a difficult inception and, like Formula 2, has its many supporters. Next year with trade support and rather more competitive entries it could well realise some of the extravagant claims made by its promoters.

To a reasonably broad-minded person it could be anticipated that both formulae could be operated at the same time and, all things being equal, could prosper together. It is evident, though, that the promoters of Formula 5000 regrettably regard Formula 2 as being in competition with their formula, and are doing their best to eradicate it in this country. One only has to consider Grovewood's refusal to promote any Formula 2 races and to read the jingoistic pieces in their publications to realise this.

One is therefore forced to the conclusion that what Grovewood are doing might be all right for Grovewood, but not necessarily good for motor racing generally. Naturally, one does not expect a business concern to promote activities which are unprofitable, but it is clear that Grovewood have no basis on which to claim that running Formula 2 is an unprofitable exercise. After all it is nearly three years since they promoted a race for the current formula.

ASHINGTON, SUSSEX.

R. G. WILLS

Clapham's clangor

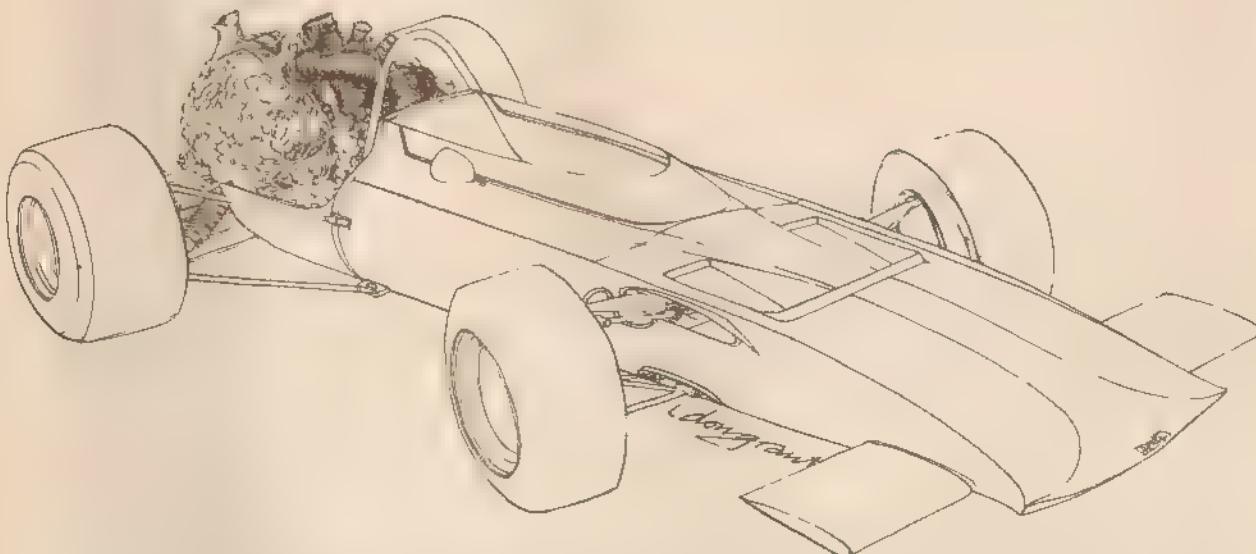
I WRITE with reference to the article written by Dave Clapham on the 9-hour Kyalami race in South Africa (AUTOSPORT, November 13).

I would like to point out that he is wrong in his statement saying that this is the first time that Mike de Udy has finished this race in four attempts—last year I was Mike's chief mechanic and he finished fifth in the race.

WELLINGTON, SALOP

G. RALPHS.

The editor is not bound to agree with opinions expressed by readers.



Following the advent of March comes the news of yet another Formula 1 challenger, the April. The company, formed last Tuesday by a group of Albanian businessmen over lunch at L'Ecu de France, is the brainchild of Count Haemoglobin, an Argentinian now residing in Capetown. The most interesting feature of the car is its means of propulsion: a twin overhead ventricle elephant heart, with transistorised nervous system. The power is transmitted to the road through a fluid flywheel (working on a hydrocharged water-wheel principle), and then via a 5-speed Hewland gearbox. "The beauty of this type of power unit is its torque and reliability," says its brilliant young designer Robert Beard. "I first got the idea while watching Jungle Book last Monday with my Aunt Doris." There are already plans for F2, F3, F4, FF, F5000, CanAm, saloon, and Indycars, which they hope to have ready for the Boxing Day Brands.



The first post-war motor race, the September 1945 Prix de Paris in the Bois de Boulogne, gets under way. Etancelin's Alfa leads, with Sommer's Talbot at left.

Raymond Sommer and Philippe Etancelin

THE FRENCH PRIVATEERS

By WILLIAM COURT

FORGET about Louis Chiron. If you can, for a moment—and anyway he deserves an article of his own—and remember the other two leading free-dancing Frenchmen of those post-war years, Raymond Sommer, whom they called *coeur de lion*, and Philippe Etancelin who was less grandly called *Phi-Phi*. Both were hell-driving independents almost all their days: they could both afford to be, for they were men of means for whom motor racing was the prince of sports and a hobby to be pursued with all their might, but as and when and how the spirit moved them.

Not for them the dictates of sponsors or team managers, with their pit signals and contrived publicity finishes. For them motor racing was a game where you needed a fast strong car and a stout right foot, with the devil left to deal with the hindmost. In a café at Monte Carlo this year I heard a couple of English enthusiasts grumbling through mouthfuls of

patisserie that they weren't the characters any more. I could hardly agree less—but things are different now, for who could afford to play Sommer and Etancelin? And even they and their like could only have achieved real fame and success in times when Factory Rule was not the governing factor in Grand Prix racing.

Back in the early pre-German 1930s, especially when Alfas ceased works participation at the end of 1932, racing became a glorious free-for-all, and it was in this win-or-bust atmosphere of split-second finishes that these two Frenchmen learned their trade. Their cars varied and they often had several: thus in 1933 Sommer had a 2.3 Alfa, as well as the new 3-litre single seater Maserati on which he cut some splendid capers at Monaco's Gasworks Hairpin

"which called above all for good brakes and the front of the cars fairly hopped as their drivers trod on their pedals . . . the Maseratis went wide, the drivers

locked over and with a great piercing scream of tyres, the tails swung round. Dirt tracking on concrete, and what a strain on chassis and axles!"

Nor did it do Sommer much good, and neither he nor Etancelin finished, for all the value they gave the spectators. It was at Montlhéry's French Grand Prix that they had their finest hour, finishing second and fourth with their Alfas. Etancelin, in particular, held the lead until the last lap, when he found a failing gearbox harder to conquer than Campari's Maserati—he was even having to stop on some corners to engage another gear.

The German onslaught of 1934 drove these happy independents into the shadows of minor Grands Prix, voiturette and sports car racing. At this time European politics made it very difficult for even the most famed French drivers to get places in Italian, let alone German teams, and they had to make do with some very second rate "native" products. Thus Sommer, Etancelin and several like them were denied the opportunities their skill deserved just as they were coming to their peak as potential Grand Prix drivers.

However, when Germany lay in the dust after the war, the first motor race in September 1945 found them both prominently on the line, Etancelin actually leading off in the same kind of Alfa as he had used in that 1933 French Grand Prix, while Sommer had an unblown 4½-litre Talbot. Between them they cracked on gamely for quite some years, and Sommer was among the very fastest drivers of that early post-war period. In many ways he was also the most colourful and spectacular as well, as if bent on showing the world what they had been missing ever since those early 1930s.

Back in 1932 Alfa-Romeo produced their second All-Conquering design—the Tipo B monoposto: that is until Sommer got to grips with it. This was late in the year at the long forsaken Miramas autodrome, a flat featureless concrete oval built in the track boom of the 1920s. Here came Nuvolari, at one of the peaks of his fame, with the mighty monoposto all set to mop up the small French provincial event that was the 1932 Grand Prix de Marseille. He was soon to learn that *La Marseillaise* is an anthem of independence!

In those times cars raced on big narrow section tyres, ate plugs, drank dope and breathed oil liberally, so pit stops really mattered. Of course Nuvolari set his usual cracking pace, so when he stopped for the



Harry Schell and Sommer (in linen helmet) look sadly at the BRM after the 1950 Silverstone fiasco (left). Etancelin impresses a point on Nuvolari at Monza (right).



first time he quite thought he had shaken off all his pursuers near and far. Of course somebody should have told him, but nobody knew any better, least of all that Sommer was only 80 secs behind. This margin was soon dissipated in a leisurely stop lasting over 3 minutes while the Alfa mechanics were lightheartedly refilling and changing everything in sight, to say nothing of "watering" the driver in the Camargue heat.

Presently the little Italian maestro set off, did he but know it, a whole lap behind, but the whole Alfa staff, including manager Aldo Giovannini, thought all was well and had not a care in the world even when Sommer started piling on lead. But Truth Will Out and with it all the Faster Signals in France, but could they get Nuvolari to twig? Could they nothing? Why, he even stopped to see what all the excitement was about! They soon told him, Nuvolari soon "told" his car, and down came the lap record in leaps and bounds. However it was not enough, and maybe it was even too much, for he stripped a tyre with Sommer in sight. Of course Giovannini lodged an appeal—after all he had quite some face to save—but after examining the charts he decided to let well alone. Thus it came about that Sommer slew his first giant of Portello.

By 1946 a new All-Conquering Alfa was abroad—the Type 158, which made its first post-war appearance in June at St Cloud. This time the car suffered transmission trouble and it was left to Sommer to score the one and only victory over them until the 4½-litre Ferrari at Silverstone in July 1951. Oddly enough Sommer had driven the first Grand Prix Ferrari in 1948, and had later urged Ferrari to build the big unblown cars, as well as being one of the first drivers to race the 158 when it first appeared in 1938. Some people do surely get round!

Come 1950 and resistance to the Alfas had become almost a technicality of programme filling, so judge of their wonderment when they came up against Sommer at super-fast Spa with an old pattern Talbot and found him holding fifth place behind their four-car team, then actually going through to the lead when they had their first fuel stop. Such things simply did not happen to those Alfas, and to team manager Guidotti the thing was as impossible as it had been to Giovannini 18 years before. So off he went to lodge his protest there and then: of course Sommer had to be a lap behind, but Spa is a long circuit, Belgian timekeeping was not that bad, and the timekeepers were hardly suffering from double vision, so poor old Guidotti was sent back to his anxious watch as the Alfas gradually climbed back to their normal in-line-ahead stations and Sommer's car duly expired.

But what an effort it had been, and how thoroughly he had rattled the might of Alfa-Romeo for yet a third time. That year Sommer was becoming quite a household word in England, for in addition to being named No 1 for the new BRM organisation he had also taken to "Coopering" with the early 500 and 1100 cc models, and was loud in his enthusiasm for the cars and the sheer cut-and-thrust of their racing, which must have taken him right back to his early days.

Three weeks after the BRM's failure at Silverstone this great character driver was killed when his 1100 cc Cooper left the road in a minor French race. Few continentals wore crash helmets in those days, and Sommer died of head injuries. The week before he had given another tremendous performance on his Talbot at Monza



A crossed-up Sommer harries Villoresi as they turn onto the sea-front at Monaco; both are in 4½-litre Ferraris.



Etancelin grits his teeth in characteristic fashion as he presses on with his Talbot-Lago during a race in 1949.

against the Alfas and the new 4½-litre Ferraris.

With Sommer it was both what he did and the way he actually did it. By contrast, and although his career was longer, at both ends, Etancelin never quite achieved the same success. His burly, thick-set figure was a landmark at many races before the war and almost as many after it, most noticeably his famous cap which he always wore reversed in the old Edwardian style. When crash helmets became compulsory in 1952 it was thought he would retire rather than bow his headgear to the new order but, typically, he had his own answer to the Establishment. Not only must the famous cap continue to be worn but, like that of justice, it must also be seen to be worn! So what simpler than to wear an open pattern racing cyclist's helmet with the cap plainly visible beneath?

He went on racing his Talbot in various *formule libre* races after 1951 along with the BRM, the Thinwall Ferrari and their various ancient playmates, and ran his last race round his native Rouen circuit in 1953, finishing third behind a couple of 2½-litre Ferraris after a wonderful duel with another fire-eating character, Harry Schell. Almost invariably he drove in shirtsleeves, generally rolled up, and rough old grey flannel trousers, with gritted teeth, pro-

truding tongue and arms flailing up and down almost round and round as well when Gallic enthusiasm got the better of him. Nor was it all idle horseplay: of course he knew jolly well it was what the public expected and he was artist and showman enough to see they got it, but he was also there to go fast.

Apart from 1933, he had a great day at Monaco in 1935 in the 6-cylinder 3.7-litre Maserati when he got the better of Caracciola and actually set up a lead on the crack Mercedes driver for second place! Caracciola simply over-revved his engine trying to catch "Phi-Phi" and retired, but in the end the Maserati lost its oil pressure and was limping round in fourth place after a typical fiery display. Very few could better Caracciola in those days, let alone actually get him flustered. Hard tyresquealing driving certainly it was, but no man, not even Nuvolari himself, that day did more to chase those Germans in a vastly inferior car.

Then there was his run of successes in 1949, when he took full advantage of the absence of Alfas to enjoy an Independents' Indian Summer such as had hardly been seen since 1933. He survives splendidly today and it is always good to see his broad figure, slightly larger and more stooping than in his racing days, wearing the Anciens Pilotes blazer.

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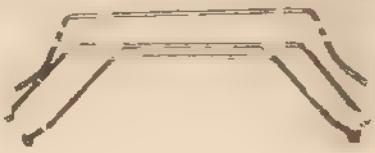
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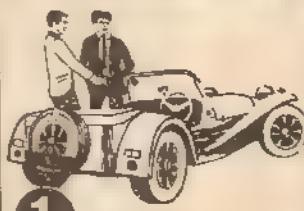
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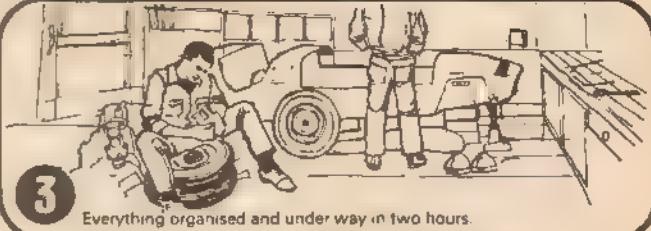
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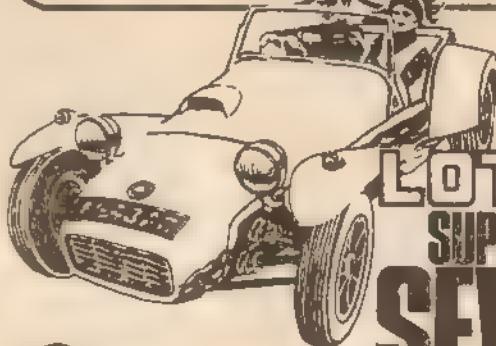
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Focus on CLUBMEN'S FORMULA

Double track test by SIMON TAYLOR

PARADOXICALLY, the introduction recently of the new Formula F100 has resulted in a great show of strength and support for the Clubmen's Formula. FF100, using barely modified 1300 cc engines and road tyres, is actually intended to replace the ill-supported sports-racing and special GT events at some club meetings, but when it was first announced many Clubmen's drivers not surprisingly saw it as a threat to their own formula's existence. Race organisers, club secretaries and the motoring press were bombarded with letters and phone calls pledging support for the Clubmen's Formula, and a major reorganisation of their own affairs by the people who race Clubmen's cars was precipitated.

Rather than a formula which was dreamt up round an organiser's (or a sponsor's) office desk, the Clubmen's Formula gradually developed, although it was Nick Syrett of the BRSCC who, seeing expensive streamlined rear-engined machinery beginning to move in on the sports-racing class, first separated the Lotus 7s, U2s, DRWs and the like which were giving clubmen cheap, enjoyable and quite fast racing and called them Clubmen's cars. Apart from a minimum cockpit width to ensure that the cars are theoretically two-seaters, the rules are very simple: Clubmen's cars must be front-engined sports-racing cars without all-enveloping bodies (ie with cycle-type front wings), and must use pushrod engines of Ford or BMC manufacture in two classes, up to 1000 cc and 1001 to 1600 cc. One or two other rules keep costs from

escalating: superchargers, limited-slip diffs, fuel injection and more than four forward gears are not allowed.

However, in direct contrast to some current "cheap" formulae, there is no limit on engine tuning or wheels and tyres. The fact that you are unlikely to win fame and you will certainly not win fortune in Clubmen's racing is itself enough to keep the overall costs reasonably low and produces atmosphere which is very friendly and probably nearer the much lamented amateur-enthusiast ambience that has all but disappeared from club racing. Nowadays a few people have sponsors in Clubmen's racing as in most other classes, and there are one or two pretty costly cars, but it is still possible to race—and have a lot of enjoyment and a reasonable amount of success—with a car costing £750 or less. A formula becomes expensive not so much because of its rules, but because of its rewards, which attract the ambitious and semi-professional driver who is prepared to devote an enormous amount of money and time to ensuring that he goes a bit quicker than the next bloke. He won't give you a hand to replace a broken half-shaft between practice and the race, either. That this has happened in Formula Ford, for example, is not necessarily a criticism of that formula, which provides a valuable stepping stone for up-and-coming drivers, and a good spectacle too. But fortunately there are other classes of racing which suit the true club driver better—and Clubmen's is one of them.

Clubmen's is actually one of the fastest

of them. With full-race engines and racing wheels and tyres the cars sound and handle like the proper racers they are, there is no danger of the tyre squeal drowning the exhaust note! Many of the 1-litre cars use second-hand Formula 3 engines with steel bottom ends and dry sumps, which give them 10,000 rpm rev limits and a power/weight ratio not far off that of a proper F3 car—yet a good second-hand F3 motor can be picked up for less than £400. It costs well over £200 to get a "standard" Formula Ford engine prepared... Dry sumps and steel bottom ends are less common in the 1600 class, in which there are competitive cars with fairly inexpensive sidedraught engines and about 135 bhp or so, with useful torque.

Almost ever since the BRSCC first started running exclusively Clubmen's races they have organised an annual Clubmen's Championship, with qualifying rounds at their meetings during the year. This season the situation became rather complicated because, while the BRSCC were running their championship, which totalled some 17 rounds, the BARC decided that they would run a Clubmen's Championship too. As a result some drivers did one contest, some did another, and some fitted between the two or just did non-championship events, so that all the quick cars rarely got onto the same grid at the same time. In addition the Clubmen's drivers had no organisation to represent their interests. Now, largely due to the efforts of Deryck Cook (a Surrey DRW driver who took part in the first-ever offi-



cial Clubmen's race at Brands Hatch in 1965, and incidentally won this year's BRSCC Championship after a very consistent season), there is an official Clubmen's Register, which keeps the names, addresses and telephone numbers of all active clubmen's drivers, and is in contact with race organisers and club secretaries to ensure that Clubmen's events are properly publicised and that grids are well-filled.

Some of the Register's founder-members recently met Nick Syrett of the BRSCC and Grahame White of the BARC to sort out the championship situation, with the result that the two clubs have agreed to organise jointly a National Clubmen's Championship next year, with 12 qualifying rounds at 10 different circuits up and down the country. The reduced number of rounds should ensure that everybody who wants to follow the Championship seriously will be able to do so without astronomical expense, and still be able to take part in other non-championship events at his favourite circuits. There is a gap of at least two weeks between every round.

I recently track-tested two very successful clubmen's cars, one a 1000 cc car which was designed and built by its driver (as are several Clubmen's cars), and one a

Accelerating out of Woodcote, the long-nosed Ellova displays its single trailing arm at the rear, and, just above it, the differential cooling scoop.

1600 cc version of one of the most popular proprietary Clubmen's chassis, the U2.

The Ellova

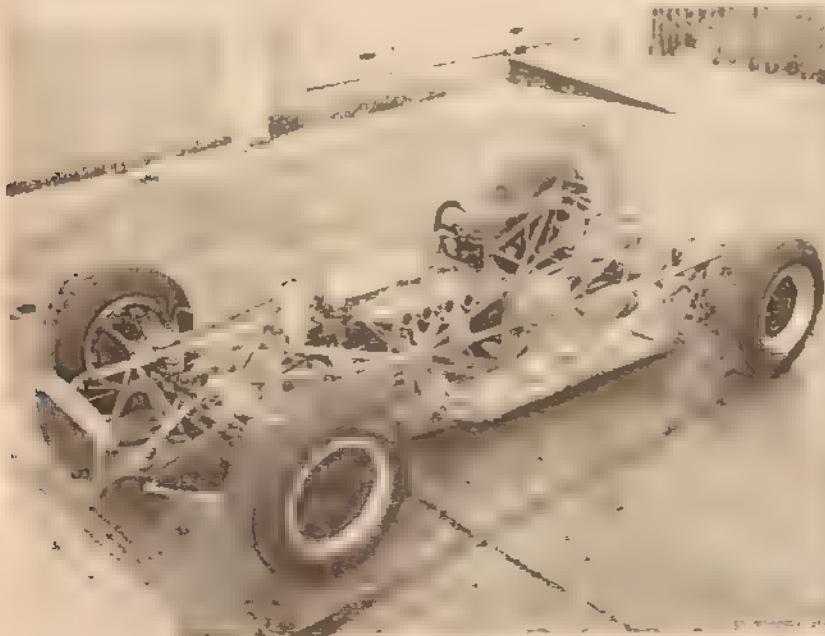
The 1-litre car is the property of Sid Marler, who has been in motor racing for a very long time—in fact in the days when he did 750 Formula racing most of the races were being won by one C. Chapman in a thing called a Lotus. His first Clubmen's car, which he built and raced in the middle 1960s, was based on a front-engined Elva-BMC Formula Junior which was modified in the centre to make it a two-seater. The result, called the Ellova, went very quickly and is still around in Clubmen's events.

For his current car, the Ellova Mk 2, Marler decided to follow a similar pattern, and bought a Cooper T76 F3 chassis in bits, complete with suspension, intending to move the engine to the front and modify the back to take a wide cockpit. This proved to be more of a job than the heavy old Cooper chassis was worth, so he designed a new chassis to take the Cooper suspension, which employs inboard front coil/damper units operated by rocking top arms, with lower wishbones. The chassis

was built by Bradco at Muswell Hill, using mainly 1/2-in and 1-in square tube, and GP Metalcraft of Fortis Green clothed it in a beautifully finished alloy body, with a long nose section which houses a ducted radiator. The rear suspension is as on the Cooper, with the uprights located by lower wishbones and links, with a single top link and single upper trailing arm. The 7-in front, 9-in rear Cooper wheels are now used for the wet, and 8 ins and 10 ins Minilites are used for dry conditions, shod with 970 mix Dunlops.

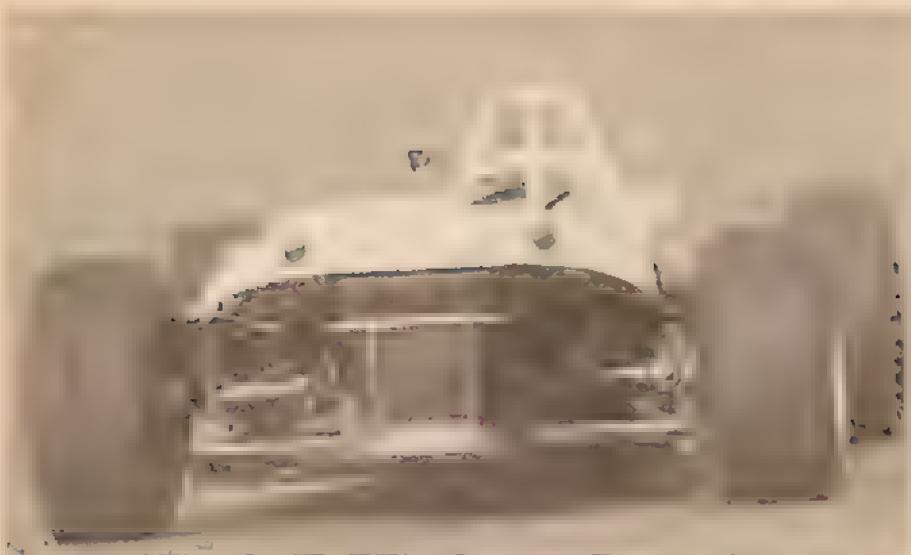
The engine, mounted well back in the car, is a straightforward sidedraught Cosworth MAE, similar to the F3 engine except of course that in the Clubmen's Formula there is no carburation limit and so twin Webers are used. The car is immaculately turned out in white with smart black trim in the cockpit, and the professional origins of the body show in the neatly flared tail panel, with a duct to cool the differential mounted just behind the driver's right shoulder. Tony Harvey, who runs Flintstone Racing in North Finchley, helped Marler to build the car and assists in the preparation.

I drove the car on a bone dry day on



The Ellova chassis, of half inch and five-eighth inch square tube, is copiously triangulated (left). The rear suspension like the front is taken directly from the T76 Cooper. The shape of the fuel tank avoids surge when it is running low (right)





Looking naked without its wings, the Ellova slides out of Becketts on opposite lock with all four wheels flat on the ground.

the Silverstone club circuit, where Marler holds the 1000 cc Clubmen's lap record in 1 m 8.4 s. The car instantly felt right the moment I sat in it, for all the controls were neatly laid out and everything was well finished. It felt right out on the circuit, too. After a few exploratory laps I started to go more quickly and found that the Ellova was wonderfully sure-footed. The outboard discs all round, which come from the Cooper, were tremendously powerful, and this, combined with the rock-steady stability of the car, meant that it was possible to rush through Maggotts and down to Becketts flat out in top and then go hard onto the brakes well after the 100 yds marker board, down two gears and push it through the corner. If the braking was left impossibly late, so that the brakes were still on when the car started to take the corner, naturally strong understeer set in, but this could be counteracted by easing off the throttle which would bring the tail round nicely. None of this treatment seemed to upset the car's balance. At Woodcote, too, the braking could be left to just before the 100 yds marker and, taking third gear and cutting a late apex, the Ellova would come smoothly out of the

corner without any drama at all. A fast corner like Copse showed that the car was well set-up, feeling absolutely neutral.

If anything, the engine felt slightly less powerful than the latest downdraught motors in other Clubmen's cars I had driven, but the Ellova's lap records here and elsewhere show that its first-rate handling more than makes up for any power deficiency. In all I did about 40 laps in the car, the latter half sans mudguards as one of the front ones displayed signs of parting company with the car thanks to a cracked mounting (the wings are designed to be rapidly removable, making the Ellova eligible for monoposto and formule libre events). Despite sticking religiously to a 9000 rpm rev limit (in races Marler uses 9800 rpm), I found to my surprise that my best lap was a few tenths faster than the car's official lap record, which would support Marler's feeling that when he set the record he was being badly baulked by a 1600 cc opponent in the corners! The Ellova is certainly a car which a novice could drive quickly straight away without getting himself into trouble. For next season it is being equipped with a down-draughted 1600 cc engine.

The Tech-Del U2

Certainly one of the fastest Clubmen's cars at the moment is the Tech-Del U2, sponsored by the famous magnesium wheel manufacturers and raced by Jeremy Lord, a Bournemouth solicitor who has been driving U2s for five seasons. U2s, produced by Arthur Mallock, have an ancestry stretching back to 750 Formula racing; over the years they have developed considerably, so that the latest Mk 8s have double wishbone front suspension replacing the familiar swing-axle IFS to reduce camber change and improve stability under braking, although they still have the coil-sprung BMC rigid rear axle, located by trailing arms and a Panhard rod. The basis is still an 18 and 20 gauge square and round tube spaceframe, which Mallock believes to be the only design in existence with all six sides of the chassis fully triangulated. The familiar boxy shape of all U2s comes from the fact that, apart from the fibreglass nose cone, the body is simply made up of single-curvature alloy panels riveted to the frame, although on the Tech-Del car the tail has been swept up at the back in a fashionable wedge, an idea which has been copied by several other U2 owners.

Complete kits of parts to build a U2 are available from Mallock, and from then on it's up to the bloke putting it all together. The Tech-Del car was built by Bob Le Sueur, known to one and all as "Haggis," and the standard of workmanship is superb. As befits the company that owns, enters and sponsors the car, it naturally uses Minilite wheels front and rear, as well as Tech-Del magnesium bell-housing gearbox casing, and there are several other light alloy bits and pieces on the car, like the rear brake drum spacer units, for Tech-Del use it as a test-bed development vehicle for many of their ideas.

For much of the season the car has been plagued with various engine troubles, but C. Lucas Engineering were asked to rebuild the unit around mid-season and, although they had never tackled a down-draught pushrod 1600 unit before, the result was 143 bhp at 7200 rpm on the brake, with max torque of 117 lbs/ft at 6000 rpm. With a wet weight of 8½ cwt, the performance is therefore considerable.



Big nose fins help to keep the Tech-Del U2's high-speed handling predictable.



The engine's 143 bhp makes the 8 cwt U2 sit down under hard acceleration.

The potential of the car was first properly realised at Brands Hatch in October, when Jeremy got pushed off on the first lap and, knocked almost 2 secs off the Clubmen's lap record and left it at 53.6 secs. Even coming through the field from last to sixth, so Derek Wootton of Tech-Del, the driving force behind the *équipe*, and Mike Brown, who prepares the car, reckon there is more to come.

This time the track used for my test was the Silverstone Grand Prix circuit, on a horrid drizzly day. Although it wasn't actually raining in the afternoon and the track eventually dried here and there, most of it was still very greasy. The only other occupant of the circuit when I was out was the works prototype Lola T190 F5000 car, which Trevor Taylor was testing, and that looked a real handful!

The cockpit of the Tech-Del U2, has the rev-counter in a binnacle ahead of the driver, where it is very easy to read, with the auxiliary instruments and switches in a separate angled panel on the left. The canted engine is mounted well back and angled to the left of the car at the front to give plenty of pedal space, and the carburettors sprout impressively out of the bonnet. Under some conditions they can spray petrol onto the driver's goggles, which can be a bit disconcerting!

The first impression on driving the car is one of tremendously torquey power. Lord only uses third and top in races apart from leaving the line, even on corners like Druids at Brands, and although 8000

rpm is used in extreme circumstances I found that with the 4.22 to 1 diff that was fitted I was having to lift off very early on along Hanger Straight to avoid exceeding the 7000 rpm limit we had imposed for the test. On the slippery surface, incautious throttle openings in third or top gear made the car snake even on the straight, and it was not possible to accelerate coming out of a corner until the car was in a straight line again. However, going by the antics of the other Taylor in his F5000 car, who always seemed to be going sideways whenever he blasted past me, I think that the track was exceptionally slippery that day.

In the places where the track did get a little drier I was able to discover that the roadholding on smooth, fast corners was excellent, helped no doubt by the wide Dunlop 970 tyres. U2s normally understeer under these circumstances, but the Tech-Del car has large nose fins which undoubtedly help to keep the front wheels sticking, while the central engine position and wedge tail ensure plenty of traction. However, on bumps the back end was not quite so happy, for the rigid rear axle involves a fair amount of unsprung weight, and between Copse and Maggotts the back wheels bounced a good deal, although there was no loss of directional stability.

It was a shame that I could not try the U2 on a really dry track as I had the Ellova, for with its extra power it did seem quite a handful, but there is no doubt that in Jeremy Lord's hands it is an

excellent weapon, as its lap records at Castle Combe and Brands Hatch prove. It certainly is quick enough, as are all competitive 1600 Clubman's cars, to give a fairly experienced club driver quite an exciting season. If you compare the lap records at any circuit for Formula Ford, prod sports machines and GT cars to those of Clubmen's cars you will see that Clubmen's do go very quickly. Their supporters hope that 1970 should be the best year yet for the formula; with many new cars appearing on the circuits and an increasingly high standard of turn-out and competitiveness, they could well be right.

1969 National Clubmen's Championship rounds

March 15	...	Snetterton
March 27		Cadwell Park
April 18		Castle Combe
May 3		Thruexton
May 17		Brands Hatch
June 6		Oulton Park
June 21		Croft
July 11		Castle Combe
July 25		RuRforth
August 9		Malory Park
September 5		RuRforth
September 27		Silverstone

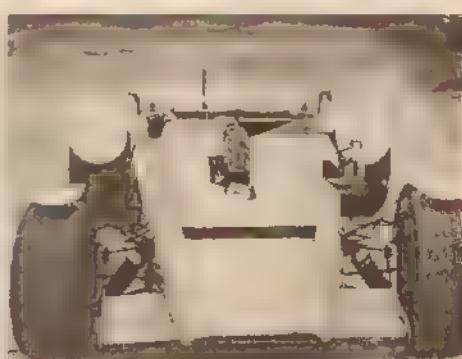
Clubmen's Register A enquires to Derry Cook, Thorne Cottage, Glaziers Lane, Normandy, Surrey. Phone (home) 2215 (work) 2201.



The downdraught Lucas engine of the U2 is askew in the chassis to allow plenty of pedal room



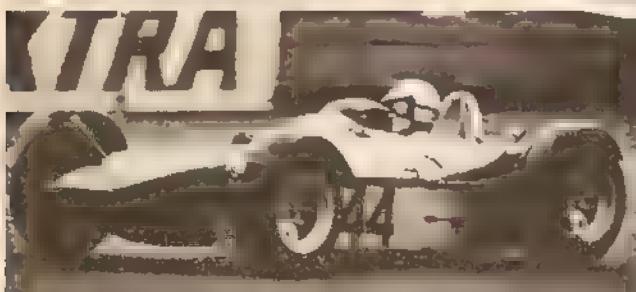
With drooping nosecowl and raised tail, the U2 presents a fashionable wedge profile (left) The downdraught Webers dominate the bonnet of the U2, note the ducted cooling system (right)



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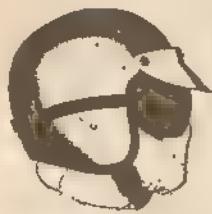
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PROFILE

EMERSON FITTIPALDI

"I am going into Formula 2 next year to learn from people like Rindt."

By JUSTIN HALER

39-23-15

IN a matter of a few months Emerson Fittipaldi has risen from the status of a complete unknown to one of the most promising of all the young drivers, his almost unceasing run of victories in the ultra-competitive Formula 3 marking him out as the man most likely to bring back South America into Formula 1, from which they have been absent since the days of Fangio, Gonzalez and Marimon. However, just as with Tim Schenken last year, many of Fittipaldi's admirers are unaware that quite an amount of competition experience preceded the European first season victories, and that Emerson is by no means an overnight star.

NOW approaching 23, Emerson Fittipaldi has racing in his family, for his father Wilson Snr, a well-known, motoring journalist in Brazil, not only had followed Fangio's career to the extent of coming over to Europe in 1950 to follow the Argentinian's season, but he had also taken part in competition events, and indeed it was only a nasty accident in 1952 on a 500 cc racing BMW motorcycle that curtailed his effort. Thus quite naturally Emerson's parents were wary of the young Emerson doing motorcycle racing, and they only allowed him to try 50 cc bikes. Nevertheless, he got started in bike racing at the early age of 15, one year above the minimum age limit, and began two years'

successful bike racing on 50 cc machines with a win in his very first race. Simultaneously his brother Wilson junior, three years his senior, was racing karts and Emerson acted as his mechanic. Naturally enough Emerson soon got the urge to get behind the wheel himself, and at the age of 17 (the bare minimum) his father bought him a kart.

Fittipaldi was a quick learner, and in 1965 he won the well contested local Sao Paulo kart championship. He was only 18, but the local motoring authorities soon realised that he possessed talent, and he landed himself a works drive in a locally-assembled 850 Renault Dauphine Gordini saloon, through his brother driving Alpine

GTs for the same team. The Gordini was used for local novices' races at Rio de Janeiro, and true to the form he had displayed so far Emerson carried off the G2 novices' championship. He also got paired up with Luiz Fernando Smith in one of the Brazilian-assembled Alpine Interlagos GTs for a 500 kms race, and the pair came fifth overall and first in class.

Political troubles saw to it that the works team pulled out of racing for the following year, but a Brazilian speed shop came up with an offer of an old 750 saloon with Alpine brakes, engine, gearbox and suspension for libre-type saloon races. "It was very funny because of the old shape," says Emerson, but it proved very quick, and in a race in the wet Emerson piloted it to second place overall behind a Chevrolet Corvette and ahead of a Ford Thunderbird and another Corvette. Then came an offer to drive an ex-Autodelta 1964 Zagato aluminium-bodied Alfa GTZ 1300. "It was very competitive for Brazil, but I had very bad luck with it. I was leading four or five races and something broke."

In between racing, Emerson was now working with his brother Wilson in their speed shop in Brazil. They made fibreglass bodies for Volkswagens, bucket seats and so on. "I started making a leather-covered steering wheel for myself and my friends started to buy them." Then in 1966 the two brothers started to build their own karts. They decided to get into the market in a big way with these Minikarts—"We were very successful—we had eight works karts; we just got the best drivers and we won everything. I didn't win the championship that year, but I like very much karts; it's good for the sense of balance." Towards the end of the year another offer came his way. This time the car was a Brazilian GT, the Mallzoni, which was powered by an 1100 cc Auto-Union/DKW engine. He did three long distance races with it, taking a second place overall and a class win at Interlagos, and a fourth overall and another class win at Rio de Janeiro.

Emerson still kept karting in 1967, but his main efforts were centred around the newly-introduced Formula Vee. There was a seven-race Brazilian Vee championship and so the Fittipaldi brothers constructed their own make of Vee; in 1967 Vee was the big thing because there were still no works teams in racing. Emerson won five of the seven Vee races and finished second in the other two, naturally taking the Brazilian



Emerson's competition career began when he was 15 with a 50 cc motorcycle. On the left 17-year-old Emerson heads towards victory. On the right Emerson tweaks his self-built Mini-Kart during a 1967 event. He made his name in karting and still karts.



title. He also did some more long distance racing, this time with a 2-litre Porsche-engined Karmann Ghia entered by the local Porsche dealer; this yielded two second places and three wins. He wound up second in the Brazilian GT championship to Jose Pace, who will be racing in F3 next year for Jim Russell together with Wilson Jnr, and he clinched the Brazilian karting championship with a 125 cc Mini-kart.

The Porsche distributor was pleased with the Karmann Ghia's results, and so towards the end of the year he gave the go-ahead for the construction of the Fittipaldi-Porsche GT. This featured a space-frame chassis and neat Carrera 6-like body with Porsche engine, gearbox, wheels, brakes and so on. Emerson and Wilson did the final long distance Brazilian race of 1967, where they were ranged against such opposition as the Portuguese Lotus 47s of Nogueira Pinto and Carlos Fernandez. "We were 8 secs a lap quicker, and leading the field until the gearbox broke." The works Alpines were now back in racing, and the event was won by Luiz Bueno, now doing well in Formula Ford in England, paired with Fernandez Smith in an Alpine.

In 1968 Emerson continued with the Porsche GT. "I led the four races I did, but the gearbox always broke. It was a pity, for it was a very good car for Brazil, but because of the import duty we couldn't get a new gearbox, so we always had to repair the old one. The first gear always broke and the pieces ruined the rest." Emerson's other motor racing that year was mainly confined to a couple of Vee races. He won one of them, and retired in the other while second to Ricardo Achcar, now another successful European Formula Ford exponent. He also did some saloon events with a Volkswagen, taking class wins and a third and fourth place overall in long distance GT/saloon events behind an Alpine GT and some Alfa GTAs.

With the Interlagos circuit closed, and the works team once again out of racing, there were few races in Brazil. However, karting was still being taken very seriously, and with substantial prize money, it was very competitive. "Many kart races I won gave me more than twice the cost of the kart in prize money; besides it was the only way to keep racing."

That year ended with a long-distance Brazil Group 2 race, which Emerson won with his brother Wilson, after 12 hours' racing in the rain. Their Volkswagen beat the Escort-type Ford of Jose Pace. After this race Emerson began to think about the future: "For a long time I had wanted to come to Europe to learn; there are so many good cars and drivers . . ." Thus with enough money to buy a Formula Ford he made the long trip. "I arrived in England in March. I didn't know anybody except Frank Williams, whom I had spoken to in the Argentine in the Temporada series. But he didn't have a Titan to sell, so I went to Merlyn." There he met Deny Rowland, who had raced an FF Merlyn successfully in 1968, and was now building engines. Emerson was lucky here, for Rowland agreed to supply an engine for Emerson's newly-acquired FF Merlyn Mk 11A.

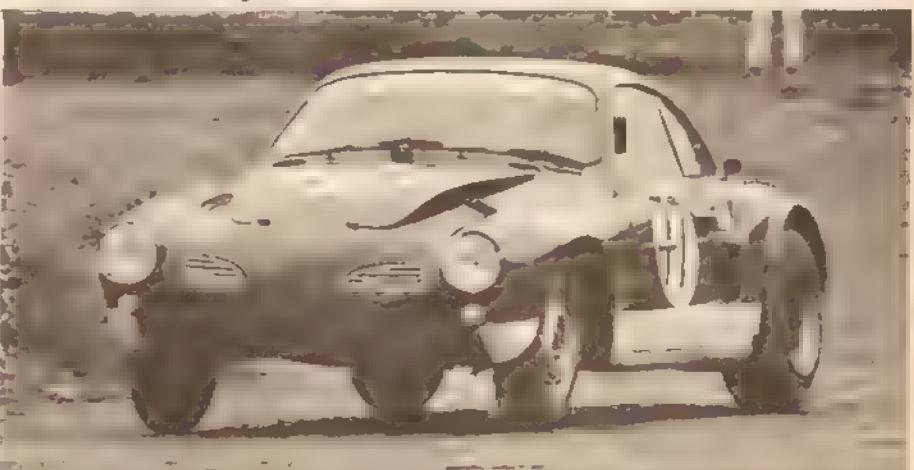
Emerson was now well set to try to take Europe by storm, and that was, to the surprise of so many people, almost exactly what he did. "I liked FF very much," Emerson recalls, "it had much more power than I thought it would have." All he managed to do before his début race at Zandvoort was to get in half an hour's testing at Lydden Hill sorting the car out en route to Dover. "I was second fastest to Tony Trimmer in practice and in my heat I was leading before the engine blew up."



Co-driving with Jose Pace in the Alfa Romeo Giulietta Zagato in a long distance event in 1966.



Emerson in the Auto-Union-engined Mallzoni GT leads the Karmann Ghia during a 1966 race at Interlagos.



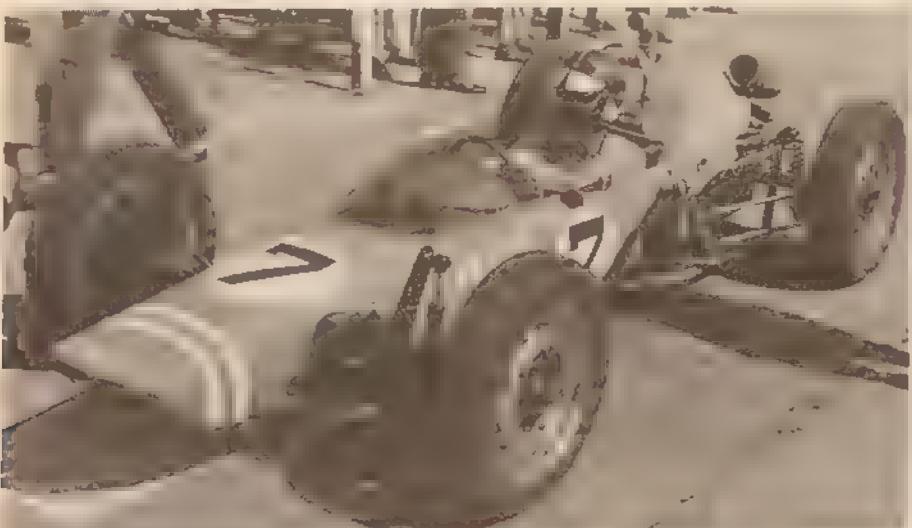
Emerson this time at the wheel of the Porsche-engined Karmann Ghia, which he drove for the local dealer.



The most sophisticated Fittipaldi-built machine was this Porsche-based GT, which proved very fast, but unreliable.



Emerson in the very rapid Porsche-powered lightweight Volkswagen leads his brother Wilson in an Alfa Romeo GTA.



This Fittipaldi Vee carried Emerson to five wins and two second places in seven races in 1967, which naturally gave him the Brazilian Formula Vee championship.



Emerson in the Russell Lotus 59 leads Tim Schenken's Brabham BT28 and Reine Wisell's Chevron going into Stirling's during the September 1 Brands Hatch. 39-23-16

A win at Snetterton followed, and from then on he was well on the road to success.

Fellow Brazilian Carlos Avallone introduced him to Jim Russell, and he was offered a Formula 3 drive. "I hadn't realised how good Formula 3 was. When I was in Brazil everyone was saying that Formula 3 was finished and that Formula Ford was the thing." Russell was already aware of the talent of this young Brazilian after his drives at Vallelunga (second to David Walker in Russell's Lotus 61) and at Snetterton where he beat Walker, and so Emerson bought a Lotus 59 rolling chassis, and Jim Russell was back in big time racing as an entrant. His first F3 race was at

Mallory Park where he surprised the F3 circus by putting up a very fine show in spite of gear selection difficulties to take a very hard-earned fifth place. The next week he was just pipped at Brands Hatch by Bev Bond in the Race Cars International Brabham BT28, and then the week later he turned the tables on Bond and won.

Another Brands victory over Roy Pike's Gold Leaf Lotus followed, and then came Emerson's first international. At Brands Hatch on September 1 he took on the might of the F3 world, and was leading Tim Schenken's Brabham BT28 and Reine Wisell in the works Chevron B15 before he spun down to third place. "It was

very good experience," he says. "I could watch the others drive and try to do the same and learn more." This is typical of his extremely modest attitude, but he was led rarely enough. At Crystal Palace he was narrowly pipped in his heat by Howden Ganley's Chevron B15, but he went on to win the final. Brands the next day produced another victory, which was followed up by his first international F3 win at Monthéry. He missed the Cadwell Park international because Russell was more keen for him to amass Lombank championship points and sent him to Mallory Park, where he won from Dave Walker. Brake trouble intervened at the next Mallory Park and prevented him from starting, and then in practice for the October 19 Brands Hatch he had a very nasty shunt when he got the car off-line in the damp conditions and hit the bank at Clearways very hard, writing off the chassis but emerging unscathed. He finished off the season with a win in the Lombank final Brands Hatch, which gave him the F3 title, and another at the TV Thruxton.

Fittipaldi is the first to stress that his great run of success has hardly been entirely due to his driving. "I have one of the best chassis in the Lotus, the best engines from Holbay, a very good mechanic (Ralph Firman) and Jim Russell's advice. It's so very important to have a real team effort." Such success in so short a space of time have prompted many offers, although Fittipaldi is wary of moving too quickly. Recently he tested the F5000 Lotus-Ford 70 at Snetterton. He says of this testing (which was done in the wet): "It's fantastic; the difference between Formula 3 and Formula 5000 is, well, the difference is 400 bhp! What I must do next year is Formula 2—with a similar car to the Formula 3, but with 240 bhp. I still want to do Formula 3 as it gives you very good experience—and experience is one of the most important things."

At the end of the season, just before he went back to Brazil both for a holiday and to do part of the forthcoming Brazilian Formula Ford series with a Lotus 61, Fittipaldi signed a contract with Lotus Components. Next year he will contest all the European Trophy F2 races with a Jim Russell-administered, Lotus Components-owned Lotus 59B, again with Ralph Firman as his mechanic. He will also drive some international F3 races with a Gold Leaf-liveried 59, and he may do some G4/6 events with a modified 62.

For someone with so much success already behind him, Fittipaldi's modesty is disarming. He consistently emphasises the importance of driving experience—"It's also good just to test cars"—and he says that luck, of which he has had a great deal this year, is instrumental. "I am going into Formula 2 next year to learn from people like Rindt. A driver can go very quickly to the top and come down as quickly. I will be very pleased next year to finish seventh or eighth in Formula 2 races—it would be like winning in Formula 3."

When one talks to any of the real star-material drivers one is always keen to try to pinpoint a particular factor which endows them with the ability to go so quickly. Fittipaldi is not sure, but says that one of the most difficult factors is to know where the limit is. One would be surprised, having seen Fittipaldi drive, to see him mid-field even in Formula 2, and although he will keep stern tabs on his progress rate, it cannot be too long before South America has produced another F1 driver.



Richard Longman in a Mini Cooper S.

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SEASONAL SURVEY: 1

FORMULA 1

By PATRICK McNALLY

THIS has been a vintage year for Formula 1. The 3-litre formula has gone from strength to strength since its inception and is currently providing the closest, fastest racing ever to be seen in Grands Prix. The past season of F1 ran true to the form so easily predictable at the beginning of the year, and two drivers stood out head and shoulders above the rest: the new World Champion Jackie Stewart and Jochen Rindt, both in their fifth year of Grand Prix racing. To a lesser extent towards the end of the year Jacky Ickx showed a similar sort of form.

The Ford V8 engine designed and built by Cosworth showed itself to be still unbeatable, powering the winning car in every single race. The Ferrari and BRM V12 engines both proved too fragile, although their power outputs and torque curves were said to match the invincible Cosworth DFV. Surprisingly few people elected to change drastically from their 1968 chassis designs which were remarkably evenly matched. The Matra MS80 was brand new and built to take full advantage of aerofoils, but the Brabham, Lotus, McLaren and Ferrari chassis were little changed.

Tyres played an important role, and while at the beginning of the year Dunlop and Firestone provided the best equipment, at the end of the season Goodyears completely eclipsed them both with the G20, which showed a clean pair of treads to the rest in the same way as Firestone had done the previous year with their ZB compounds.

The biggest single factor to change the face of Grand Prix racing was the ban on aerofoils in their existing form—this came in a Monaco after both works Lotuses had crashed at Barcelona due to wing failure. The four wheel-drive buffs were in for a rude surprise when theory was not proved in practice, and none of the Matra, Lotus or McLaren 4wd cars proved to be competitive—and were even disappointing compared to their 2wd rivals on the rare occasions when it was wet.

Once again team management played an all-important part, and much of the credit for Stewart's superb season must go to Ken Tyrrell's level-headed and intelligent direction.

Engines

COSWORTH had not been idle during the winter of 1968, and brought out their Series 9 engine in time for the South African Grand Prix last March. This was virtually identical except for revised camshafts and new timing gears (and the price!), and it could be revved to 10,000 rpm as against 9,500 on the Series 8. After a bad season with the Repco four-cam unit Brabham had joined the Ford brigade, leaving only Ferrari and BRM with non-Ford propulsion. Perhaps because of the different camshafts the Ford engine seemed less reliable than it had been the previous year, and some teams suffered as many as three engine failures in one race meeting.

It is difficult to say exactly why the Ferrari and BRM V12s gave so much trouble. The Italian engine had looked most promising the previous season, and although there had been lots of niggly things letting them down, the engine was basically reliable. Forghieri changed relatively few things, the most radical being reversing the ports so that the exhausts no longer emerged from the centre of the V, and redesigning the bottom end to eliminate some of the friction, yet somehow the engine suddenly became unreliable, and Chris Amon only finished one Grand Prix. When they tried the flat-12 Ferrari at Monza before the Italian Grand Prix it did only a handful of laps before digesting a piston. The piston break-up was blamed on an outside firm who make the

original castings and do some preparatory machining, and who apparently weren't working close enough to the tolerances. As the same company forge the pistons for the V12 it seems likely that they were also to blame for a good proportion of the other blow-ups.

The English V12 engine was a four-cam example of BRM's 1968 12-cylinder, and that too proved pretty unreliable, but as the team had so many other problems it is very difficult to pin-point the root cause: like Ferrari they too had a lubrication deficiency which showed up noticeably at Monza and several other races later in the year. From all accounts the Bourne engine was producing its claimed output, but the chassis was no longer competitive. The upheavals at BRM which caused Tony Rudd to leave and also made them give the French Grand Prix a miss seemed only to aggravate the situation, for once he had gone there was no scapegoat.

Chassis

The similarity among the chassis was even more marked than it had been the previous year. Matra introduced their new MS80 in time for the South African GP (although Stewart chose to use the MS10). The new design from Vélizy was the only really new chassis to appear, for everyone else was tending just to update original equipment. True, Brabham's BT26 rear end was changed a little to accommodate Ford power, as indeed was the rear of the BRM in deference to their new 48-valve V12 engine, but generally speaking there were no startling changes. However, Matra's aerodynamic specialists had built a new monocoque specifically designed to take advantage of full-length spoilers operating directly on both front

and rear suspension; partly because of this and partly due to the location of the fuel bags centrally within the sides of the monocoque, the MS80 looked almost bulbous compared to its slimmer cigar-shaped competitors.

Lotus and McLaren had both concentrated all their efforts on their new 4wd cars, the Lotus Type 63 and the McLaren M9A, as they were equally convinced that this would prove to be the answer. It is now history that the 4wd cars from Lotus, McLaren and Matra have so far proved to be uncompetitive compared to their highly developed adversaries, and it looks as if it's going to be some time before a 4wd car will be sufficiently developed to be a serious threat. The net result of all this was that Stewart had a 1969 car while Rindt and Hill were still in 49Bs. While Hulme had his original M7A, McLaren was theoretically slightly better off in the new, stiffer but not radically different Formula 5000 monocoque version, the M7C.

Ferrari were still using their aero-monocoque, which in fact is really a reinforced space frame, and the differences between 0017 and 0019, Amor's 1969 cars, and 0007 and 0009, his '68 mounts, were scarcely discernible, although the suspension pick-up points had been changed and there were a few other suspension modifications. It was virtually the same story at BRM, who started off using a 138 for Surtees with Oliver in the 133; then both their drivers used 138s right up until mid-season, when Surtees tried the completely Bourne-designed lightweight 139. Yet the construction of the 139 was sufficiently similar for it to arrive at Zandvoort without causing a major stir—except within the BRM camp!

Gearboxes, tyres, wings

Everyone with the exception of Ferrari (and BRM on occasions) used a Hewland gearbox, mainly the DG300, although at various times the smaller FG200 (Andretti's Kyalami Lotus) and the larger FG400 were tried. Like the Cosworth engine, the Hewland gearbox proved invincible, and the number of transmission failures (as opposed to transmission drive failures) was exceedingly small. The fuel systems used by the various cars were all very similar—rubber fuel bags within the monocoque; aluminium fuel tanks are now virtually a thing of the past, due to the problems of servicing and new safety regulations. Driveshaft components too were fairly conventional, with nearly everybody, except for Ferrari and BRM, using Hardy Spicer couplings; Brabham used a rubber doughnut as well.

At the beginning of the season both Firestone and Dunlop tyres were fairly evenly matched, Dunlop having caught up with Firestone's ZB11 by introducing their CR84, while the users of Goodyear were

Jacky Ickx presses Jackie Stewart very hard during their German GP race, shortly before the Brabham went by the Matra to score a great win.

WORLD CHAMPIONSHIP OF DRIVERS 1969 AND OTHER F1 RACES

Pos.	Driver	Car	1969														Points	Race of Champions	Daily Express	Silverstone	Oulton Park	Gold Cup	Non-Championship F1 Races
			South Africa	Spain	Malta	Holland	France	Brussels	Germany	Italy	Canada	America	Mexico	Points	Points	Points	Points	Points	Points	Points	Points		
1	Jackie Stewart	Matra International Matra-Ford MS10/Matra Ford MS80	1	1	1	1	1	1	1	1	1	1	1	63	1	1	1	1	1	1	1		
2	Jacky Ickx	Motor Racing Developments Brabham-Ford BT26	—	—	—	—	—	—	—	—	—	—	—	37	—	—	—	—	—	—	—		
3	Bruce McLaren	Bruce McLaren Motor Racing McLaren-Ford M7A/M7B/M7C	—	—	—	—	—	—	—	—	—	—	—	26	—	—	—	—	—	—	—		
4	Joachim Rindt	Gold Leaf Team Lotus-Ford 49B/Gold Leaf Team Lotus Ford 63 4wd	—	—	—	—	—	—	—	—	—	—	—	22	—	—	—	—	—	—	—		
5	Denny Hulme	Bruce McLaren Motor Racing McLaren Ford M7A	—	—	—	—	—	—	—	—	—	—	—	20	—	—	—	—	—	—	—		
6	Jean-Pierre Beltoise	Matra International Matra Ford MS10/Matra International Matra Ford MS80/Matra International Matra-Ford MS84 4wd	—	—	—	—	—	—	—	—	—	—	—	19	—	—	—	—	—	—	—		
7	Graham Hill	Gold Leaf Team Lotus Lotus-Ford 49B	—	—	—	—	—	—	—	—	—	—	—	16	—	—	—	—	—	—	—		
8	Peter Courage	Frank W. Williams Racing Cars Brabham-Ford BT26	—	—	—	—	—	—	—	—	—	—	—	15	—	—	—	—	—	—	—		
9	Jim Clark	Rob Walker-Jack Dyer Lotus 49B	—	—	—	—	—	—	—	—	—	—	—	14	—	—	—	—	—	—	—		
10	Jack Brabham	Motor Racing Developments Brabham-Ford BT26	—	—	—	—	—	—	—	—	—	—	—	12	—	—	—	—	—	—	—		
11	John Surtees	Owen Racing Organisation BRM P133/P138/P139	—	—	—	—	—	—	—	—	—	—	—	10	—	—	—	—	—	—	—		
12	Chris Amon	Owen Racing Organisation BRM P133/P138/P139	—	—	—	—	—	—	—	—	—	—	—	9	—	—	—	—	—	—	—		
13	Richard Attwood	Ferrari Automobili Ferrari 312	—	—	—	—	—	—	—	—	—	—	—	8	—	—	—	—	—	—	—		
13	Vic Elford	Gold Leaf Team Lotus Lotus-Ford 49B	—	—	—	—	—	—	—	—	—	—	—	7	—	—	—	—	—	—	—		
13	Pedro Rodriguez	Antique Automobiles Cooper-Maserati T86/Antique Automobiles McLaren-Ford M7B	—	—	—	—	—	—	—	—	—	—	—	6	—	—	—	—	—	—	—		
16	Johnny Servoz-Gavin	Rep. Parmal Racing Team BRM P126/North American Racing Team Ferrari 312	—	—	—	—	—	—	—	—	—	—	—	5	—	—	—	—	—	—	—		
16	Silvio Moser	Matra International Matra-Ford MS84 4wd	—	—	—	—	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—		
16	Jack Oliver	Brabham-Ford BT24	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—		
16	John Miles	Owen Racing Organisation BRM P133/P138/P139	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—		
16	Pete Lovensky	Gold Leaf Team Lotus Lotus-Ford 63 4wd	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—		
16	Mario Andretti	Pete Lovensky VW Inc Lotus-Ford 49B	—	—	—	—	—	—	—	—	—	—	—	10	—	—	—	—	—	—	—		
16	Daren Bell	Gold Leaf Team Lotus Lotus-Ford 49B/Gold Leaf Team Lotus Lotus-Ford 63 4wd	—	—	—	—	—	—	—	—	—	—	—	9	—	—	—	—	—	—	—		
16	George Eaton	Ferrari Automobili Ferrari 312/Bruce McLaren Motor Racing McLaren-Ford M9A 4wd	—	—	—	—	—	—	—	—	—	—	—	8	—	—	—	—	—	—	—		
16	John Love	Owen Racing Organisation BRM P138/P139	—	—	—	—	—	—	—	—	—	—	—	7	—	—	—	—	—	—	—		
16	Sam Tingle	Team Gunston Lotus-Ford 49	—	—	—	—	—	—	—	—	—	—	—	6	—	—	—	—	—	—	—		
16	Basil van Rooyen	Team Gunston Lotus-Ford 49	—	—	—	—	—	—	—	—	—	—	—	5	—	—	—	—	—	—	—		
16	Peter de Klerk	Team Lawson McLaren-Ford M7A	—	—	—	—	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—		
16	Bi Bi Brack	Jack Holmes Brabham-Repco BT22	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—		
16	John Cordts	Owen Racing Organisation BRM P138	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—		
16	A. Pease	Paul Sartor Brabham-Climax BT23B	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—		
16	vo Borrier	John Mervyn Eagle-Climax 66	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	—	—		
16	Charles Lucas	Ecurie Bonnier Lotus-Ford 49B/Gold Leaf Team Lotus-Ford 63 4wd	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	—	—		
16	Roy Pike	Tony Dean BRM P261	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	—	—		
16	Jack Smith	Jack Smith Brabham-Climax BT23B	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	—	—		

R Retired

U Unclassified

DNS Practised but did not start.

CONSTRUCTORS' CHAMPIONSHIP 1969

Pos.	Constructor	Kyalami	Barcelona	Monte Carlo	Zandvoort	Clayton Foyard	Silverstone	Nürburgring	Monza	Midpoint Park	Watkins Glen	Mexico City	Total
		South Africa	Spain	Malta	Holland	France	Brussels	Germany	Italy	Canada	America	Mexico	Points
1	Matra-Ford	9	9	1	9	9	9	6	9	9	9	9	66
2	Brabham-Ford	—	1	6	2	4	6	9	2	9	6	6	51
3	Lotus-Ford	6	—	9	6	1	3	3	6	6	4	1	47
4	McLaren-Ford	4	6	2	3	—	4	3	3	2	4	9	40
5	BRM	—	2	—	4	—	—	1	1	2	4	2	7
6	Ferrari	—	—	—	—	—	—	—	—	—	2	1	7

COMPARISON OF LAP AND RACE SPEEDS 1968/1969

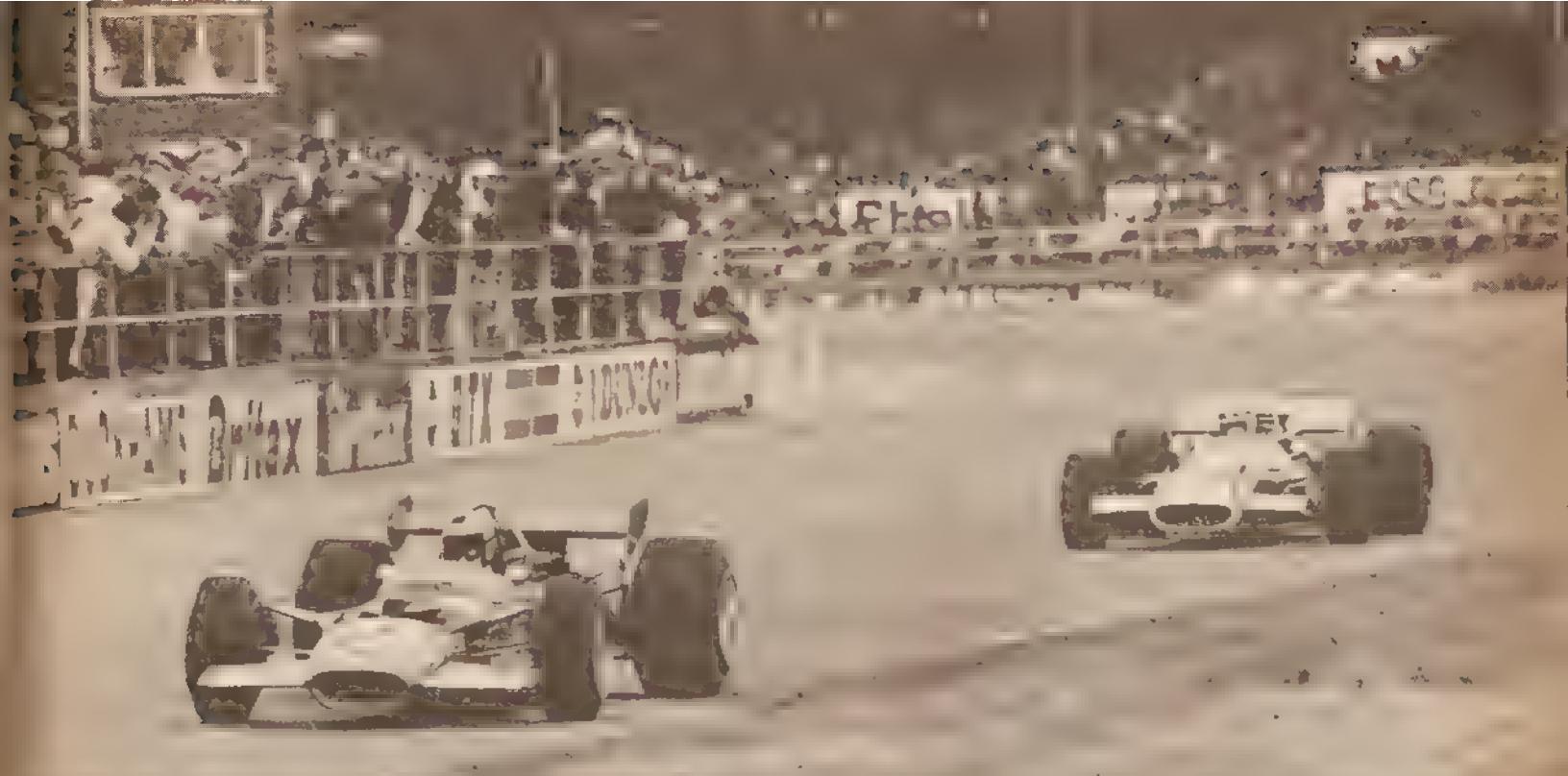
Event	Venue	1969				1968			
		Race Average	Fastest Lap	Race Average	Fastest Lap	Race Average	Fastest Lap	Race Average	Fastest Lap
South African Grand Prix	Kyalami	Stewart/112.62 mph	Stewart/112.50 mph*	Hill/77.82 mph	Clark/107.42 mph	Hill/77.82 mph	Clark/109.68 mph	Hill/77.82 mph	Clark/109.68 mph
Spanish Grand Prix	Barcelona	Stewart/93.89 mph	Stewart/92.67 mph*	Stewart/82.19 mph	Stewart/82.67 mph*	Stewart/82.67 mph	Stewart/82.67 mph	Stewart/82.67 mph	Stewart/82.67 mph
Monaco Grand Prix	Monte Carlo	Stewart/120.94 mph	Stewart/113.02 mph*	Stewart/97.71 mph	Stewart/98.62 mph*	Stewart/97.71 mph	Stewart/98.62 mph*	Stewart/97.71 mph	Stewart/98.62 mph
French Grand Prix	Zandvoort	Stewart/127.25 mph	Stewart/127.25 mph	Stewart/127.25 mph	Stewart/127.25 mph	Stewart/127.25 mph	Stewart/127.25 mph	Stewart/127.25 mph	Stewart/127.25 mph
British Grand Prix	Glenmont Ferrand	Ickx/108.43 mph	Ickx/110.13 mph*	Ickx/110.13 mph*	Ickx/110.13 mph*	Ickx/110.13 mph*	Ickx/110.13 mph*	Ickx/110.13 mph*	Ickx/110.13 mph
German Grand Prix	Sachsenring	Stewart/146.96 mph	Be Rose/150.96 mph*	Be Rose/150.96 mph*	Stewart/146.96 mph				
European Grand Prix	Monza	Stewart/146.96 mph	Ickx/114.78 mph*	Ickx/114.78 mph*	Ickx/114.78 mph*	Ickx/114.78 mph*	Ickx/114.78 mph*	Ickx/114.78 mph	Ickx/114.78 mph
Canadian Grand Prix	Mosport Park	Rindt/126.36 mph	Rindt/128.69 mph*	Rindt/126.36 mph	Rindt/128.69 mph*	Rindt/126.36 mph	Rindt/128.69 mph*	Rindt/126.36 mph	Rindt/128.69 mph
United States Grand Prix	Watkins Glen	Hulme/106.15 mph	Hulme/106.15 mph	Hulme/106.15 mph	Hulme/106.15 mph	Hulme/106.15 mph	Hulme/106.15 mph	Hulme/106.15 mph	Hulme/106.15 mph
Mexican Grand Prix	Mexico City	Stewart/108.65 mph	Stewart/108.65 mph	Stewart/108.65 mph	Stewart/108.65 mph	Stewart/108.65 mph	Stewart/108.65 mph	Stewart/108.65 mph	Stewart/108.65 mph
Race of Champions	Brands Hatch	Brabham/107 mph	Brabham/107 mph	Brabham/107 mph	Brabham/107 mph	Brabham/107 mph	Brabham/107 mph	Brabham/107 mph	Brabham/107 mph
Day Express	Silverstone	Ickx/109.57 mph	Ickx/112.19 mph*	Ickx/109.57 mph	Ickx/112.19 mph*	Ickx/109.57 mph	Ickx/112.19 mph*	Ickx/109.57 mph	Ickx/112.19 mph
Gold Cup	Oulton Park								

Unrestricted aerofoils were used up to the Spanish Grand Prix; they were banned for the Monaco GP, after which they were regulated in size.

*—New Record W—Wet

WINNERS' EQUIPMENT

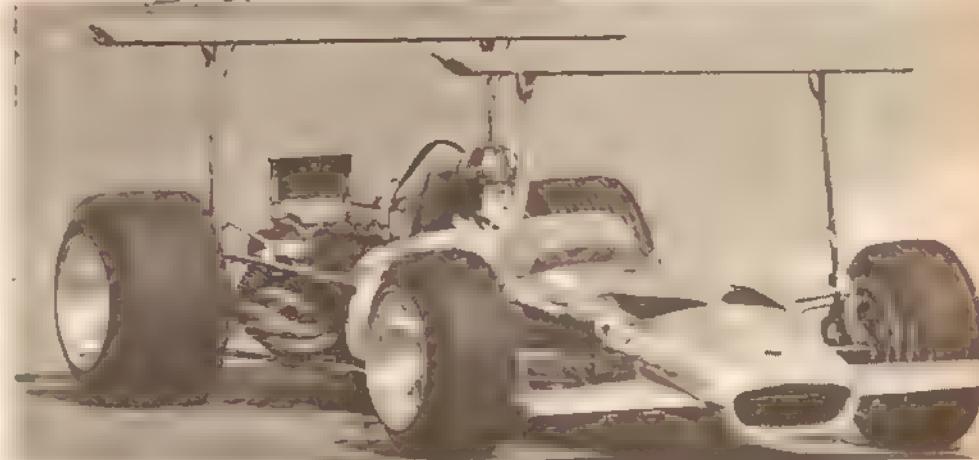
Chassis	Wins	Engine	Gearbox	Petrol	Oil	Tyres	Plugs	Injection	Ignition	Brakes	Linings	Dampers
Matra	6	Ford V8	Hewland	Elf/Caltex	Elf	Dunlop	Autolite	Lucas	Lucas	Girling	Ferodo	Armstrong
Brabham	2	Ford V8	Hewland	Gulf	Gulf	Goodyear	Champion	Lucas	Lucas	Girling	Ferodo	Armstrong/Koni
Lotus	2	Ford V8	Hewland	Shell	Shell	Firestone	Autolite	Lucas	Lucas	Girling	Ferodo	Armstrong
McLaren	1	Ford V8	Hewland	Gulf	Gulf	Goodyear	Autolite	Lucas	Lucas	Lockheed	Ferodo	Armstrong



Jochen Rindt's Lotus leads Jackie Stewart's Matra out of Silverstone's Woodcote corner. Their dice for the lead of the British GP was one of the highlights of the season. 39-23-14

at a distinct disadvantage in the dry, although their wet compound seemed pretty competitive. Goodyear then brought out the G18 and the G20, which dominated the last few races of the championship. All three companies look like retaining their interests in 1970. Matra, Frank Williams and BRM are on Dunlop; Lotus, Ferrari and Rob Walker are with Firestone; and McLaren and Brabham are firmly tied to Goodyear. The new F1 March team will be on Firestone, while Tyrrell will maintain his very close alliance with Dunlop.

The wing failures at Barcelona caused the FIA to ban aerofoils completely at Monaco while they considered the question more fully. After the Dutch race new regulations were drafted severely restricting the height and width of the wings, but typically the FIA took this sensible decision at the wrong time in the wrong place and caused a lot of unnecessary aggravation. A limitation on the dimensions and location of aerofoils had obviously been necessary before the start of the season, and the decision should have been taken over the winter, thus enabling constructors to take full advantage of their knowledge. As it was, designers found themselves back virtually to square one in mid-season, and teams like Matra and Lotus lost the advantage gained by their greater employment of downthrust. At the same time the less successful teams and the privateers found themselves running at a pleasantly reduced handicap, which did at least make for closer racing. Cosworth's Robin Herd-designed 4wd car, which had been shelved when aerofoils first appeared, now suddenly had a private airing at Silverstone, where it had some reasonably satisfactory showings in the hands of Trevor Taylor. It was not sufficiently competitive, so Costin and Duckworth decided not to run it after all—at least for the moment.



Graham Hill, here in the Lotus 49B back in the days of aerofoils, in South Africa, scored his fifth Monaco victory, but a generally disappointing season ended with a nasty crash at Watkins Glen.



Like the Brabham BT26, the M7 McLaren was in its second full year of racing, but continual improvements and some beautifully consistent driving by Bruce McLaren (here at Monaco) ensured that it was a front-runner. 39-23-5

4wd

The biggest disappointment of the year for students of F1 design was the failure of four-wheel drive. In principle driving all four wheels should have provided sufficient advantage to decimate the opposition—especially as they were now handicapped by the new wing dimensions.



John Miles in the Lotus 63.

39-23-6

However the three constructors who built four wheel drive cars, Matra, Lotus and McLaren, all ran into the same problems, although their designs differed greatly. The power split to the front and rear wheels was known to be the critical factor so far as handling went—too much power to the front produced almost uncontrollable



Jean-Pierre Beltoise in the Matra MS84

39-23-7

understeer, while too little nullified to a great extent the advantages of four-wheel drive. Matra, who were working in conjunction with Ferguson, reduced their ratio of 60 per cent rear, 40 per cent front, which they had used at the Dutch Grand Prix (the car's first showing), to 80 per cent rear, 20 per cent front by the end of the season. Lotus and McLaren, who were



Derek Bell in the McLaren M9A.

using transmission designs of their own with a lot of Hewland's help, found that they too had to make similar reductions. By the American rounds the only 4wd car to look at all promising was the Lotus 63, a brilliant Chapman contrivance which eventually showed its form due to the perseverance of John Miles, a new boy to Formula 1.



Engineer Mike Costin in the unruled Cosworth

Teams

The standards of organisation within the various teams played a more obvious role than previously. Stewart's partnership with Tyrrell continued to be an example of how it should be done, and the rapport between the Scottish ace and his team manager was as ever self-evident. A winning team has a psychological advantage which makes for high morale within the team; it is well known that nothing breeds success better than success itself, as Stewart and Tyrrell demonstrated

In contrast Rindt's relations with Chapman, already distinctly cool after the Barcelona affair, deteriorated more at the British Grand Prix, when the team was run with a singular lack of finesse. Having two Number 1 drivers in the team, the other the current World Champion, Hill, only served to fan the flames. But by the German Grand Prix both Chapman and Rindt had realised the time had come to settle their differences, which were getting neither of them very far. In the latter part of the season their relationship improved greatly; when Rindt won the American Grand Prix no one could have been happier than Chapman and their association for 1970 was now firmly cemented.

McLaren were a happy team too, and this reaped its own reward; the same could be said for the privateers, Walker, Williams and Crabbe, all of whom got remarkably good results. Brabham's had their ups and downs and, while their morale was low at mid-season due to the tyre problem, Jack's accident at Silverstone and stupid little faults, by the end of the year they completely recovered. Ferrari and BRM suffered from their own internal strife, but things may be better next year with Parnell running the Bourne team and Forghieri back at the helm with Ferrari—we shall see

Drivers

Because in Grand Prix racing too many other factors can alter the true pattern, the World Champion is not necessarily the best driver of the year. However this year's Champion Jackie Stewart thoroughly deserved his crown, clinching the championship at Monza after an incredible record of six wins, one fewer than Clark in 1963 and equaling the totals of Ascari (1952), Fangio (1954) and Clark in 1965. All year long Stewart was the man to beat, and showed himself to be a superior race driver than any of his adversaries. An extremely intelligent driver, Jackie has dedicated himself to motor racing in the same way he did to clay pigeon shooting, and is now reaping the results. He knows he is not infallible, and therefore never takes an unnecessary risk and champions the safety cause with obvious sincerity. Amusing and sociable, he is extremely well liked, although his self-confidence has unfairly been described as cockiness. His *avant garde* taste in clothes and his long flowing hair make him conspicuous—but after all motor racing is big business, and the individual image is now as important as it is in show business. Jackie never seems to relax, always applying himself enthusiastically to business and pleasure with just the same tenacity. Next year he stays with Tyrrell, who has ordered three March chassis for the team.

Only one other driver has regularly shown himself to be in the same class as Stewart—Jochen Rindt. Perhaps lacking some of Stewart's finesse, Rindt is incredibly fast, and on many occasions was quicker than Stewart. The Austrian did not however get the same results, due mainly



Piers Courage had a very rewarding year with the



John Surtees had a miserable season with the BRM. He

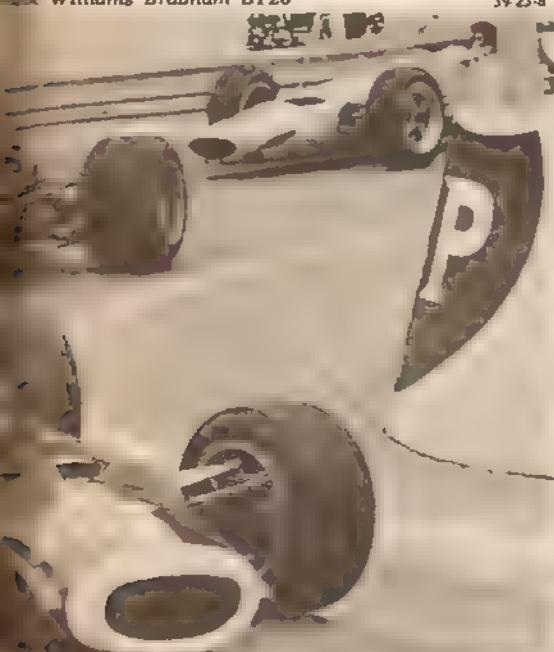


Highlight of the year for Jack Brabham was a Here he laps Derek Bell, having his only F1 Fer



Williams Brabham BT26

39-23-8



P138 leads Brabham at Monaco.

39-23-9



the wet at the Daily Express Silverstone meeting.

39-23-10

to the fragility of his Lotus. A close neighbour in Switzerland to the present World Champion, the two of them are the best of friends, although the rivalry is just as strong when they play a game of table tennis together! Jochen is a more aggressive driver and on fast circuits is without par; when he has the same experience as Jackie and a bit of luck, he will probably be as successful. Confident and resourceful, he is seldom idle and is currently involved in several projects outside motor racing; he is an extremely thoughtful host, kind and considerate, though he is never loath to voice his own opinions, either at the circuit or in the drawing room. His affairs in England are currently handled by Bernie Ecclestone, who is just as sharp as Chapman—which accounts for why Rindt has such a good deal going for him next season as Number 1 driver for Team Lotus.

Jochen made a really impressive recovery after his Spanish shunt, but his giddy spells at Clermont and the 'Ring did cause a great deal of worry, even though he had been told by his doctors to expect them.

In the latter stages of the season a third driver started to show form—Jacky Ickx. Earlier in the year Brabhams had been bugged by tyre trouble, and it wasn't until the final rounds that Ickx excelled, demonstrating the promise he had shown while driving for Ferrari the previous year. Normally a fairly placid person, Ickx showed his first signs of temperament at Monza, where a practice incident followed by a series of engine blow-ups caused him to lose his usual cool. A talented, natural driver who so far has been careful when climbing the Formula 1 ladder, Ickx returns to Ferrari for 1970. Whether this decision is the correct one it is very difficult to say: the Ferrari sports car looks like a winner, but the flat-12 F1 machine is more of an unknown quantity.

Mario Andretti drove very few races this year because of his USAC commitments, and until he starts taking F1 really seriously is unlikely to be very successful, despite his enormous skill which classifies him with Rindt and Stewart. Mario certainly has everything required to become a world champion, except for the moment for sufficient interest to forgo the rich purses of the American series, which to all intents and purposes precludes serious F1 racing. The Italian-born American will be driving for Lotus next season when he is free, and now he knows some of the circuits he will not be at such a handicap as he has been to date.

In the latter part of the season Johnny Servoz-Gavin got his job of reappraising the 4wd Matra; this car has proved too heavy for the slightly built Beltoise, and even Servoz admitted that he was exhausted in the Ferguson transmission machine. Tyrrell seems to rate Johnny fairly highly, but the 4wd car was hardly competitive and never showed him at his best. At least three teams have shown interest in him for 1970, and it will be interesting to watch his progress.

Chris Amon looked all set at the beginning of the year for a really successful season but, unlike Jochen Rindt's, his jinx of never having won a Grand Prix stayed with him, his Ferraris plagued continually by engine trouble. The New Zealander had trouble going as fast as he had the previous year in the old car. At Monaco, after continual differential trouble, he looked and behaved like a very disenchanted Ferrari driver, and who could blame him? The prospect of a Formula 1 March must be very attractive to him, and let's hope the bad season he had

with Ferrari hasn't tarnished the polished driving we saw so often in '68.

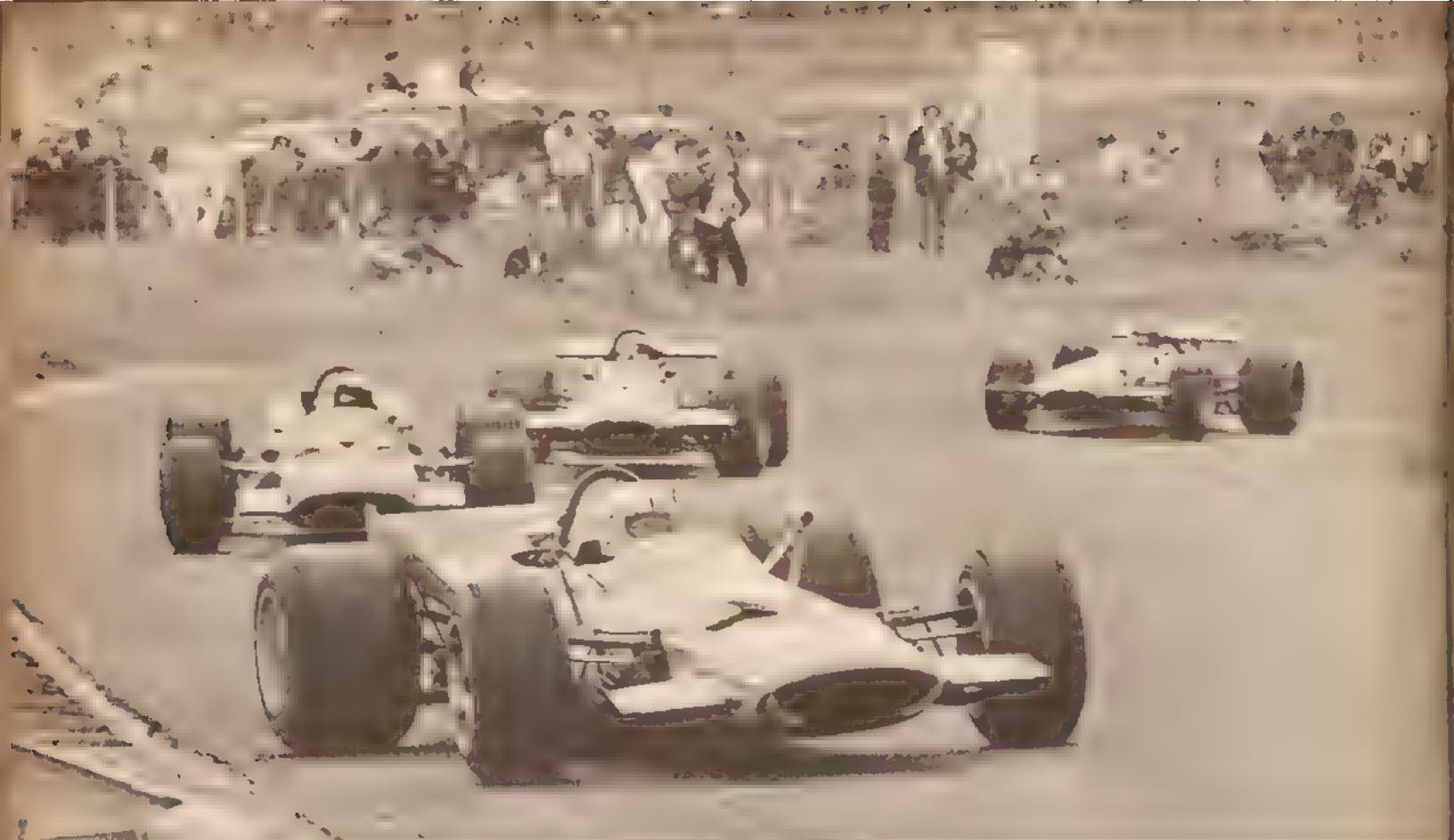
Ferrari himself thought extremely highly of Chris and was obviously very sorry he left, but when the Old Man was asked whether he would take Amon back again if the New Zealander changed his mind, Enzo replied: "If a beautiful girl is unfaithful to you and then asks to be taken back, what must be the reply?" Chris is one of the most unassuming people around who nevertheless knows his own ability and worth. With good direction he should do very well. It does seem strange that he didn't specifically exclude the sale of a car to Tyrrell when he signed his contract for March. . .

Denny Hulme continues to earn the title of being the most under rated driver around, and with his win at Mexico, despite a frustrating F1 season first with tyre troubles and latterly with mechanical failure, he was still fifth in the Championship. It would be very interesting to put Stewart and Rindt in the same car and on the same tyres and see how they fared against the quietly spoken New Zealander—they might be in for a bit of a shock. Usually in the first couple of rows on the grid, Denny is utterly reliable and is trusted implicitly by his fellow drivers. He is an unpredictable opponent, for he always seems to have a little something in reserve which he never uses unless it is absolutely imperative. His relationship with team-mate and boss man Bruce McLaren is one of the best, and despite several offers Denny will be driving once again for the Kiwi team in 1970.

Jack Brabham has been in Formula 1 since 1955, and he seems ageless. The tough Australian should never be underestimated; he wastes neither words nor energy either on or off the circuits, and can be brutally blunt. Jack doesn't like to be passed, and is sufficiently experienced to make this task extremely difficult when he wishes. Black Jack scored a fine victory at Silverstone in the wet at the Daily Express meeting, but his accident at the same circuit three months later put him out of racing until the Italian Grand Prix at Monza. With the help of Goodyear tyres and a well developed chassis his performances in the last three rounds were pretty impressive. Next year he plans to go it alone now that Ickx has left for Ferrari, and the new monocoque Brabham promises to make him a very serious challenger.

There is something of a Jekyll and Hyde nature in Jo Siffert—off the circuit he is a kind and soft-spoken person, but as soon as he gets into a car he becomes the most aggressive driver in F1 today. Despite not having a works car, Seppi's performance this year has demonstrated his ability and incredible car control. His wins for Porsche in sports car racing gave him all the confidence he needed, and the blue Walker Lotus was the most spectacularly driven car at nearly every Grand Prix. Slightly too unpredictable on the circuit for his fellow drivers to enjoy wheel-to-wheel dices, Seppi also earns the doubtful honour of being "the last of the late brakers." The Swiss is not too sensitive when it comes to sorting a car, and this year he has been driving under a severe handicap because of it. Next year, when he goes to March, he will have the advantage of all Chris Amon's testing, and his cars should be set up much better.

Highlight of Graham Hill's season was winning his fifth Monaco Grand Prix, an incredible feat. His accident two weeks previously during the Spanish Grand Prix, the result of wing failure, didn't seem to affect him at all. From then on the tur-



Denny Hulme's McLaren leads Chris Amon's Ferrari and the Brabhams of Jack Brabham and Jacky Ickx during their Zandvoort battle

39-23-11



Vic Elford's progress with the Antique Automobiles McLaren promised much, but unfortunately his F1 season was drastically curtailed by his Nürburgring crash

39-23-12

moil within the Lotus camp, which reached a peak when his 49B was sold and then repurchased when the Lotus 63 proved uncompetitive, did little to curry success for the reigning World Champion. Graham drove a very good race at Monza until a driveshaft failed, but his season came to an abrupt halt at Watkins Glen when he had his dreadful accident. Graham had been driving as well this season as he did last, and it was only Jochen's presence in the team this year which tended to put him in the shadows. A very experienced and highly competent driver, he must never be underestimated, and as long as he is in a competitive car he is a serious challenge. Chances are he may be back in a works Lotus next year after all, but there is talk of him driving a similar car or a

March for Rob Walker.

After a none too happy year with Honda, John Surtees signed with BRM at the start of the year when the Japanese firm decided to withdraw from racing, temporarily at least. Surtees has a reputation for sorting out teams, and when his BRM proved uncompetitive by the Dutch Grand Prix major internal reorganisation at Bourne resulted, which saw the departure of Tony Rudd. However things did not improve, and Surtees found himself driving an uncompetitive car all season. Because the car was insufficiently fast it is difficult to comment on Surtees' driving, other than to say he still seems as determined as ever. His influence within the team was strongly felt, but many people feel he will be more successful when he leaves the organisation

side alone and just concentrates on driving—but a man as eager and dedicated as Big John is never likely to.

Most consistent driver of the year was Bruce McLaren, who finished third in the Championship behind Ickx and Stewart to prove it—although he didn't win a Grand Prix all year. Like Denny he had to drive on uncompetitive tyres at the beginning of the year, but he still managed to earn places, for he seldom made a mistake and was nearly always there at the finish. Bruce would be the first to admit that he is not in the Ickx-Stewart category, but he is probably driving with a greater margin of safety than anybody else currently in GP racing. Mild-mannered but a tough businessman, McLaren makes motor racing pay, which can't be said for many teams. For the past couple of years Bruce has been thinking of leaving F1 if he can find suitable replacement so that he can concentrate on business and CanAm racing, but let's hope that he'll still be part of the F1 scene next year.

It was French influence that resulted in Jean-Pierre Beltoise's inclusion in the Tyrrell team, but he deserved and justified his place, driving well-judged races under the watchful eye of Le Patron. Who could ask for more than to spend a season as number 2 to Stewart? JPB learned a lot which he will be able to put to good use if (as seems probable) he leads the V12 Matra team in 1970. Beltoise also learned how to hand over his car gracefully when Stewart's let him down in practice. The young French idol is charmingly modest and knows he has a long way to go yet. If he continues to progress at the rate he did this year, France may have a potential champion.

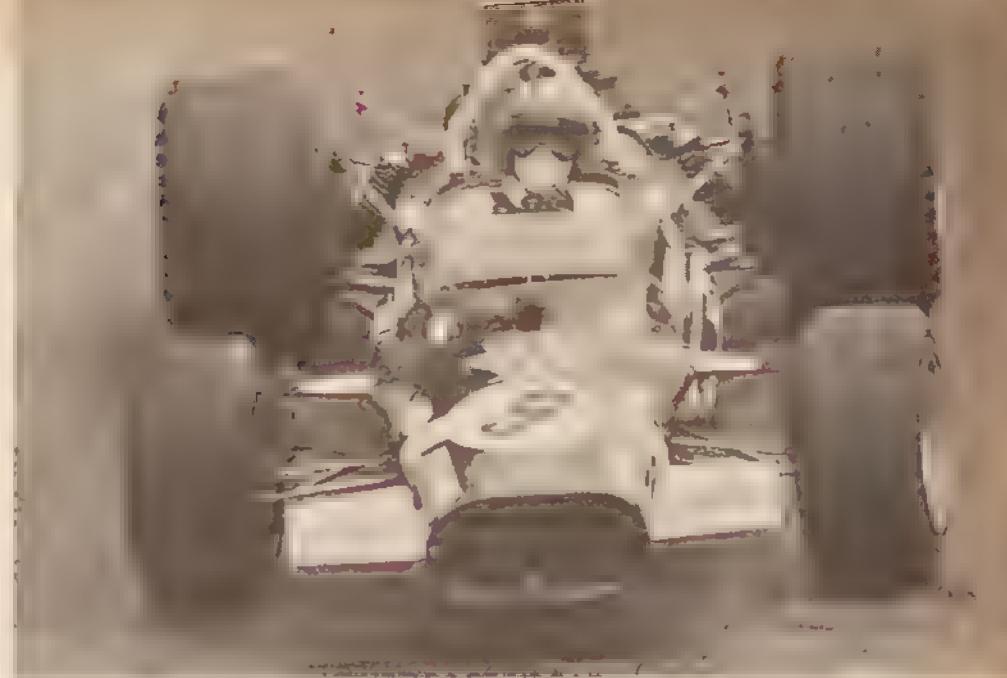
One of the biggest surprises of the year was Piers Courage, having only his second proper season in F1. Leaving BRM to drive for Frank Williams in a "Bitza" Brabham-

Ford was considered by many to be foolhardy, as the Williams team was known to be under-financed. However consistently good results all season, with two second places at Monaco and Watkins Glen, helped to refill the coffers and established Piers as a driver of great potential. His battle with Ickx at Monaco put him on the map as far as most people were concerned, although the superiority of his Dunlop tyres probably helped him in this particular dice. More impressive to my mind was his drive at Monza, when he led his first Grand Prix and battled wheel to wheel with the best of them. Youth is on Piers' side, and the young Englishman looks to have a great F1 future ahead of him. For the coming season Frank Williams has done a deal with De Tomaso who is to provide a couple of chassis to replace the Brabham—only time will tell whether this was good judgment or not. Certainly by involving himself with the Italian constructor Frank will be able to cut the cost, but De Tomaso has a reputation for losing interest in projects before they ever get off the ground. I am quite sure that the success of this team next year will depend purely on how much co-operation Frank Williams can get from De Tomaso—it may not be an easy task, but none better for it than the Williams.

Other drivers have suffered from BRM's lack of success in 1969. Pedro Rodriguez was dropped from the team at the beginning of the year due to internal problems at Bourne, and found himself out of a drive when everyone else was already signed up. When Tim Parnell offered him a drive in the Parnell works-supported entry he took it gratefully—he had no alternative. But at half season when his out-dated BRM was still running the old two-valve engine he parted from Parnell with the promise of drives from Ferrari. The Ferrari proved to be equally uncompetitive, so Pedro had a most disappointing year. At this stage of the Mexican's career such a season could be fatal, for people are quick to forget his tenacity, his lightning reactions and car control which made him one of the four men to watch in the wet in 1968. Ferrari intend to run two cars next year, but so far Pedro's name has not been mentioned.

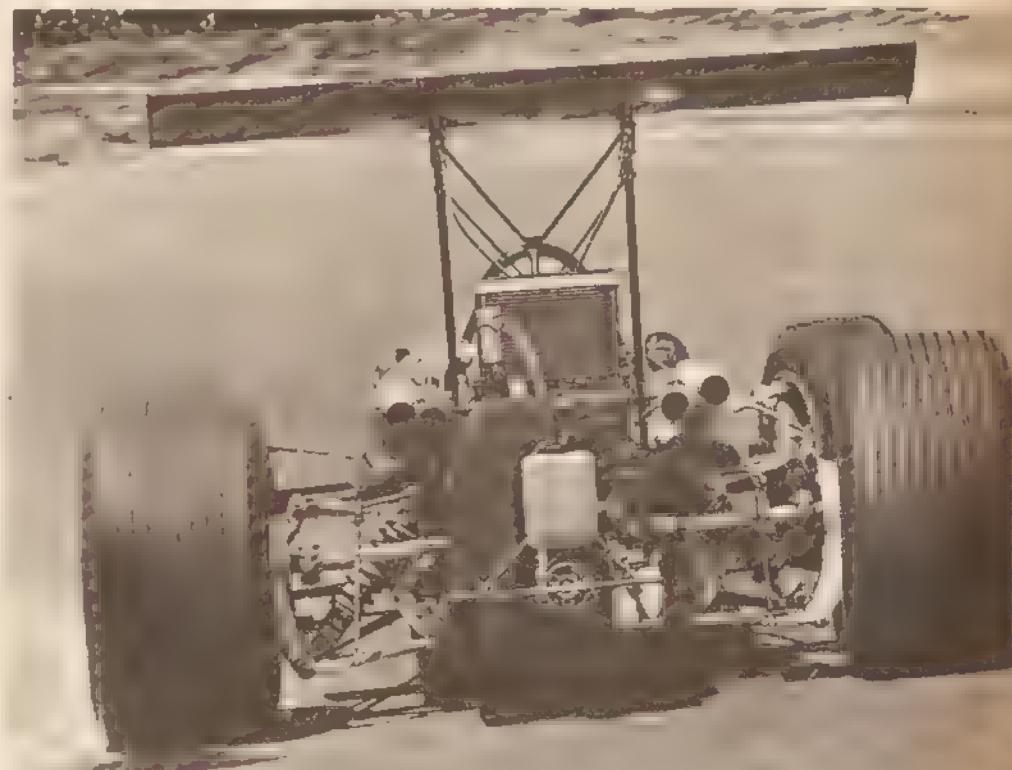
Another driver whose potential was never seen all season because of an uncompetitive BRM was Jackie Oliver. Oliver often qualified as fast if not faster than Surtees, but the fortunes of Bourne set the seal on his progress, which if anything went backwards. Like Courage and Ickx, Oliver is a young driver whose full potential has yet to be realised. The Essex driver has signed for BRM next year, but if they have another disaster it could mean the finish for him in F1 as well. Let's hope for his sake that BRM come up with a competitive car for 1970.

The ex-rally man Vic Elford, who turned to serious racing only comparatively recently, has made startling progress. When Antique Automobiles acquired the squalid McLaren, Elford drove it extremely well for one who had so little single-seater experience, and it looked as if the German Grand Prix at Nürburgring, where he broke 8 mins in practice to qualify on the third row of the grid, was going to be his big race of the season. It was very unfortunate that Elford had that dreadful accident when he got involved with the remains of Andretti's 4wd Lotus which had crashed a fraction of a second before his arrival. This put Vic and Antique Automobiles out of F1 for the rest of the year; whether Antique Automobiles run an F1 car next



As often as not, this was the way Jo Siffert piloted the Rob Walker Lotus, here en route to third place at Monaco

19-23-11



Ferrari fortunes really slumped this year, and Chris Amon had a rather fruitless season

year for Elford depends on sponsorship

Although under contract to Ferrari, Derek Bell never got a drive in a 1969 F1 race until McLaren got him released to drive his 4wd car at Silverstone in the British GP. Bell showed up quite favourably against the other 4wd merchants, but this is hardly enough to earn him a factory seat for 1970.

The other driver of note to have an F1 seat in 1969 was John Miles, who had his first drive in the Lotus 63 in the French Grand Prix at Clermont Ferrand, and went sufficiently well for Chapman to give him a drive for the rest of the year. Perseverance had its own reward, for Miles learnt to drive the car pretty quickly and he now has a permanent place in the team.

It was a great pity that Brian Redman didn't get a competitive drive this year

because he must be rated among the top ten drivers. It seems incredible with the current lack of talent that no one has given the Northerner a drive since Cooper.

After the dearth of entries last year, quite the opposite could occur in the coming season, for as long as the Ford Cosworth is invincible and readily available, any team can go F1 as long as they can find a chassis. This year no F1 constructor was too eager to build a chassis for a private entrant, but March coming on the scene could change all. The other manufacturers may feel forced to offer their designs for sale rather than see March take the pickings. A few more entries could make a lot of difference, for at the moment as soon as there are half a dozen retirements the race is often as good as dead. Whatever happens, 1970 promises to be very interesting.

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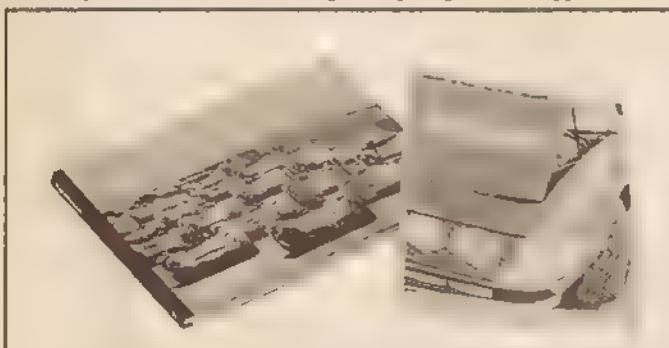
BOOKS on every aspect of motoring, motor sport, competition history and motor racing personalities past and present continue to pour onto the market, and many AUTOSPORT readers will be putting book titles near the top of their Christmas present lists. In this annual review I habitually deal with the annuals first, although the current edition of one of the most famous, *Automobile Year*, has already been discussed when it appeared last spring.

Once again *Autocourse* is the first of the new season's annuals to appear, and the 1969/70 edition, published by AUTOSPORT's parent company Haymarket Press, goes on sale next week in time for Christmas. Editor David Phipps tells me that the format that has proved so successful in past years is repeated, with a detailed analysis of the Formula 1 season by Phipps and Alan Phillips, who is responsible for those fascinatingly detailed lap charts. Also included are the usual driver assessments, plus features on the technical side of F1, four-wheel-drive, tyres, team management and so on. The Group 4 and 6 season, Indianapolis, the Tasman Series, CanAm and other types of American racing, Formula 5000 and rallies are all covered, and there are profuse illustrations in colour and black and white. *Autocourse's* great advantage is that it is very topical, for unlike other annuals it presents its record of the season only a few months after the races have taken place and while they are still fresh in everyone's memory. However, we will examine the book in more detail when it is published next week.

An annual with a difference is Eddie Guba's very enjoyable *Racereport*, for not only is it mainly pictorial, but also its treatment of the motor racing scene is fresh and humorous. There are technical pictures and diagrams, brief race reports and results, circuit diagrams and some really superb action shots, but in the main the book has off-beat pictures of people—not only drivers, but also journalists, organisers, mechanics, girl-friends, hangers-on and everyone else who finds themselves concerned in one way or another with a motor race. The result, helped by suitably irreverent captions, captures a lot of the gay and varied atmosphere of a year's motor racing, from Indy to Formula V, from CanAm to hillclimbing. The text is in two languages, German and English; *Racereport 2*, which deals with the 1968 season, is still available, and *Racereport 3* should appear in early spring.

Autocourse, Ed David Phipps, publ Haymarket Press, 9 Harrow Rd, London W2. 12½ ins by 9½ ins. £2 15s.

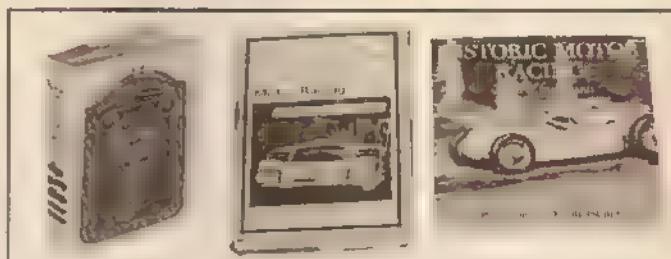
Racereport 2. By Eddie Guba, publ in GB Fountain Press, 46 Chancery Lane, London WC2. 9½ ins by 13½ ins. 142 pp.



Louis Stanley's own very personal assessment of the Formula 1 season, *Grand Prix*, appeared for the tenth time early last summer in a new compact format and from a new publisher, W. H. Allen. It is an instant improvement, for *Grand Prix* was always rather an uneasy member of the big glossy *Autocourse*/ *Automobile Year* class, simply because one man's opinion and one man's camera cannot supply a complete picture. But with his connections with BRM and his position as instigator of and impetus behind the Grand Prix Medical Unit, Stanley is able to provide an outspoken, controversial and detailed view of a single Formula 1 season, with intimate snapshots rather than good action photography to stress the personal angle. Whether one wants to read accounts of each Grand Prix when the next season is well under way is debatable, but Big Lou's pungent comments on

organisation, marshalling and above all fire precautions and circuit safety, not to mention more lighthearted subjects like drivers' coiffure, are very worthwhile—even though virtually all this material has appeared before word for word in a now defunct weekly magazine. As well as a "Top 16" drivers feature, Stanley includes a "Ten of the Best" of people like journalists, organisers, entrants and trade representatives. One article even examines Grand Prix personalities according to their horoscopes.

An annual which I always look forward to as a valuable work of reference is *Automobile Revue*, which is published annually in Switzerland to coincide with the Geneva Show in March. It is printed in German and French, and is imported to this country by Patrick Stephens. The latter half of the book provides really comprehensive listings of the world's cars, with specifications of some 1,500 models, from Scaldia to Syrena, Gilbern to Gurgel, Enzmann to Excalibur and Mean to Mitsubishi, and pictures of most of them. Technical articles, coloured cutaway drawings and profuse illustrations make up the first half of this big book, which has soft covers and 550 pages.



One of the most impressive motoring books published this year is *The Dust and the Glory*, a racing history of Ford by Leo Levine. It's a beautifully produced tome which traces Ford's involvement with motor sport from Henry the First's first race at Grosse Pointe in 1901 via Indianapolis and stock-car racing to the modern era of the Cobra, Lotus at Indy, the GTs at Le Mans and the Ford Formula 1 engine. Levine is an American newspaper columnist and, rather than a fact-by-fact history book, this is a fascinating story about the personalities, the set backs, the quarrels, the friendships and the happenings; and it is hard to put down. Its 630 pages, efficient index, pleasing layout and wealth of photographs make it well worth three guineas.

Grand Prix 10. By Louis Stanley, publ W. H. Allen, Essex St, London WC2. 8 ins by 9 ins. 252 pp. £2 5s.

Automobil Revue-Revue Automobile. Publ in GB Patrick Stephens, 9 Ely Place, London EC1. 12 ins by 9 ins. 550 pp. £2 5s.

Ford: The Dust and the Glory—a Racing History. By Leo Levine, publ in GB Collier-Macmillan, 10 South Audley St, London W1. 9½ ins by 7 ins. 630 pp. £3 3s

Anthony Pritchard has produced no fewer than four books on motor racing this year, all from different publishers. One is impressively titled *The Encyclopedia of Motor Racing*, which Pritchard has written with Keith Davey. Naturally a complete encyclopedia of the sport would fill countless volumes, but into their 300-odd pages the authors have packed a lot of useful information—brief results of major F1 and sports car races since they began, potted biographies of some well-known drivers (although naturally one finds one or two of one's own favourites omitted) and, particularly interesting, brief histories of some of the major marques in racing. Some of the 30 photographs seem less significant than others, and naturally there is insufficient room for any of the subjects to be examined in detail, but the book contains a tremendous amount of factual information and makes a very useful work of reference. In their foreword the authors say that they have consulted many sources to compile the book and that they are going to list them all, but in some cases chunks have been recognisably lifted from others' work, and it does seem strange that this is done absolutely without acknowledgement—or even revision. There are certainly some recognisable bits and pieces of AUTOSPORT in the book.

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Continued on page 36

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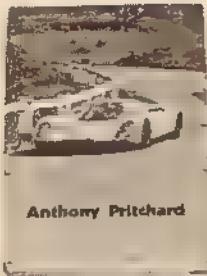
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continued

it seems strange that no full history of the Zuffenhausen machines have ever appeared, although there is Julius Weitmann's pictorial survey, while Charles Meisl's translation of Richard von Frankenberg's *Porsche—the Man and his Cars*, published by Foulis, has recently appeared in an inadequately revised edition. Anthony Pritchard's book *Porsche* does much to fill this gap. It is mainly a competition history, and after dealing fairly briefly with the 1950s it covers the 1960s in considerable detail up to the end of 1968, with a brief synopsis of 1969 to preserve topicality. Two comprehensive appendices cover Porsche specifications and racing successes.



Pritchard's *Historic Motor Racing* is in Weidenfeld & Nicholson's "Pleasures and Treasures" series and is distinguished by 24 colour plates and around 100 black and white photographs covering Grand Prix racing from early beginnings to the end of the 1950s. The text binds it all together with a survey of racing car design through the years, and this book should be particularly popular with the more informed young enthusiast.

The fourth Pritchard offering was the one I enjoyed most, because it presented the most new information. This is *British Racing Green*, which examines British racing fortunes *marque by marque* since the war. There is a lot of fascinating detail about the racing of the early 1950s, covering cars like Alta, Lester, ERA, Kieft, Tojeiro and Frazer Nash, while the more successful types—Jaguar, Aston Martin, Lister, HWM, Connaught, Cooper, Vanwall, Elva and the like have separate chapters. Lotus, BRM, Brabham and Lola are followed from their beginnings up to the present day, and this is a book which contributes a detailed and well-researched picture of the struggle of British racing car designers and manufacturers, from the days when they could not keep up in Formula 1 and earned their successes in sports car racing, up to the present day when Britain is top dog in almost every sphere of motor sport.

The Encyclopedia of Motor Racing. By Anthony Pritchard and Keith Davey, publ Robert Hale, 63 Old Brompton Rd, London SW7. 9½ ins by 6½ ins. 320 pp. £2 5s

Porsche. By Anthony Pritchard, publ Pelham Books, 52 Bedford Sq, London WC1. 8½ ins by 5½ ins. 224 pp. £2 2s.

Historic Motor Racing. By Anthony Pritchard, publ Weidenfeld & Nicholson, 5 Winsley St, London W1. 8½ ins by 8½ ins. 120 pp. £1 10s.

British Racing Green. By Anthony Pritchard, publ George Allen & Unwin, Park Lane, Hemel Hempstead, Herts. 8½ ins by 5½ ins. 280 pp. £3.

When a Leeds-based staffman of the *Daily Mirror* who designs and builds his own racing cars for fun writes a book called *High Speed, Low Cost*, you can be sure that the result will be full of down-to-earth facts and at the same time very readable. Allan Staniforth's book is primarily aimed at people who want to build their own replicas of his familiar Mini rear-engined cars, the Terrapins, with which he has had so much success in sprinting and hillclimbing and has set several world class speed records. This is a book to buy whether you are interested in building a Terrapin, or a car of your own design, or simply want to know what goes on behind the scenes when an enthusiastic clubman designs, builds, prepares and races a car. Suspension sorting, engine tuning, supercharging and record-breaking are all well covered, and the appendices are almost worth the cost of the book alone, including a list of parts required to build a Terrapin, lists of essential reading, essential tools, suppliers, clubs and formulae, and data on camshafts, gear ratios, suspension joints, torque settings, etc.

Shortly before his sad death Gregor Grant, former editor of *AUTOSPORT*, completed *AJS—The History of a Great Motorcycle*, which traces the AJS record from 1897, when the Stevens family built their first motorbike, via the AJS heyday in racing with four TT victories in a row, and on to post-war drys and recent trials successes. Appendices include a list of all AJS TT riders from 1911 to 1969, and there are 74 photographs and several drawings and diagrams.



"How-to" books on taking up motor racing are always popular, and as more young drivers are going into Formula Ford than any other class of motor racing, Brian Smith's book *Go Formula Ford* should find a ready market. Brian has raced extensively in Formula Ford and, although this is very much a beginner's book and a lot of the advice is basic common sense, it's all good reliable stuff. If you're embarking on your first season of FF racing, however much you think you know about what you're doing, this book will probably save you money sooner or later. The chapter subjects include racing drivers' schools, cornering technique, choosing a car and equipment, paperwork, clothing, pitwork and costing, plus appendices of FF regulations, circuit diagrams, useful addresses and so on.

Lord Montagu of Beaulieu's *Lost Causes of Motoring*, the untold half of Britain's motor industry, was deservedly popular, and *Lost Causes of Motoring: Europe, Volume 1* was recently added to the series. This tells the story behind German, Austrian, Dutch, Italian and Swiss motor manufacturers who prospered and then died, including OM, Isotta Fraschini, Borgward, Spyker, NAG, Austro-Daimler, Maybach and many more. The book is scrupulously researched (by Michael Sedgwick) and sympathetically written, and it also traces recurring themes responsible for the death of motor manufacturers, like wars, eccentricities of design unpopular with the public, ill-timed salutes into the avant-garde, and hasty and ill-considered policy changes.

A very important history book is *Alfa Romeo* by Peter Hull, who has been helped by Roy Slater of the VSCC's Alfa Romeo section in research. Really comprehensive histories of a marque are usually the result of painstaking work over a long period of time and their merit is in their detail, which makes this a very good book indeed. Every aspect of Alfa Romeo cars, their design, their competition history and, in the appendix, even their maintenance, are covered; this is a second edition of a book that first appeared in 1964 and it has been revised to mention current production cars, the Tipo 33 competition series, and other machines like the Mille Miglia-Alfa Tasman car.

High Speed, Low Cost. By Allan Staniforth, publ Patrick Stephens, 9 Ely Place, London EC1. 10 ins by 7½ ins. 144 pp. £2 5s

AJS—The History of a Great Motorcycle. By Gregor Grant, publ Patrick Stephens, 9 Ely Place, London EC1. 10 ins by 7½ ins. 112 pp. £1 10s.

Go Formula Ford—How to start single-seater racing. By Brian Smith, publ G. T. Foulis, 50A Bell St, Henley-on-Thames, Oxon. 8½ ins by 5½ ins. 154 pp. £1 16s.

Lost Causes of Motoring: Europe, Vol 1. By Lord Montagu of Beaulieu, publ Cassell, 35 Red Lion Sq, London WC1. 8½ ins by 5½ ins. 282 pp. £2 10s.

Alfa Romeo: A history. By Peter Hull and Roy Slater, publ Cassell, 35 Red Lion Sq, London WC1. 8½ ins by 5½ ins. 596 pp. £3 3s

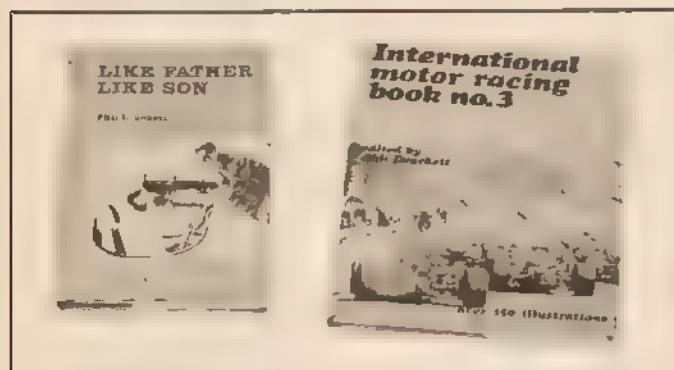


Although perhaps rather an esoteric book, T. R. Nicholson's *Sprint*, which is a detailed history of speed hillclimbs and speed trials in this country from 1899 to 1925, will prove fascinating to anyone who watched these early events on public roads. In 1925, following an accident at the Essex MC's meeting at Kop Hill, the RAC stopped granting permits for speed contests on the open highway, and an era came to an end. Nicholson's book is splendidly illustrated with contemporary photographs and includes many tabulated results, and those who follow modern hillclimbing and sprinting will be able to discover from what beginnings their sport developed.

T. R. Nicholson is also responsible for the introduction and caption material for *Sports Cars 1928-1939*, a pleasant little picture book which has over 200 very well printed colour paintings of well known sports cars of the era. The text relating to each picture is sufficiently detailed for a comprehensive view of the trends of design of those 11 years to emerge, and as the first example of a new series, the book should prove popular.

We have already reviewed Nick Brittan's book about the London-Sydney Marathon event of a year ago; soon after came *Why Finish Last?*, written by marathon winner Andrew Cowan in conjunction with fellow-Scot Graham Gauld. Rather than simply a book about the Marathon, it also covers Cowan's career since he first started in rallying. It then covers the whole marathon project from the early preparation, modification and development of the car itself, and on to destruction testing and receiving, and gives a clear idea of the sort of forethought and administration that has to go into being successful in an event like this. The Rootes budget for the Marathon was an astonishingly low £25,000, and it is estimated that their win, quite apart from other accruing prestige, immediately pushed up sales of Hillman Hunters by 10 per cent.

Phil Drackett's *Like Father, Like Son* is a very readable account of the land and water speed record attempts of Sir Malcolm and Donald Campbell, and at the same time it fills in a lot of detail of the other record-breakers with whom the Campbells were competing. Drackett is also the editor of *International Motor Racing Book No 3*, the third annual in a series intended mainly for younger enthusiasts with articles under the names of Graham Hill, Bruce McLaren, Vic Elford and many others, plus plenty of good pictures, although some of the pieces really do have to be taken with a pinch of salt.



Sprint—Speed Hillclimbs and Speed Trials in Britain 1899-1925. By T. R. Nicholson, publ David & Charles, South Devon House, Newton Abbott, Devon. 9 ins by 5½ ins. 274 pp. £3 3s.

Sports Cars 1928-1939. By T. R. Nicholson, publ Blandford Press, 167 High Holborn, London WC1. 7½ ins by 5½ ins. 184 pp. £1 5s.

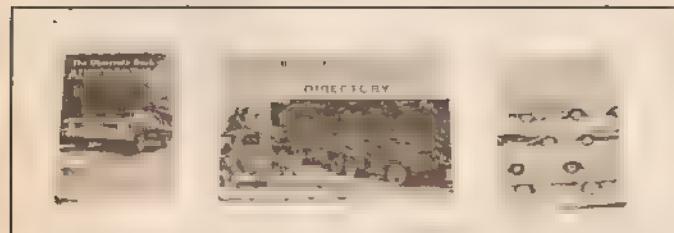
Why Finish Last?—the story behind the London-Sydney Marathon. By Andrew Cowan, publ Queen Anne Press, 49 Poland Street, London W1. 8 ins by 5½ ins. 148 pp. £1 1s.

Like Father, Like Son—the story of Malcolm and Donald Campbell. By Phil Drackett, publ Clifton Books, New England House, New England St, Brighton, Sussex. 8½ ins by 5½ ins. 126 pp. £1 5s.

International Motor Racing Book No 3. Ed Phil Drackett, publ Souvenir Press, 95 Mortimer St, London W1. 9½ ins by 7½ ins. 144 pp. £1 1s.

I must confess I was fascinated by *Car Numbers*, by Noel Woodall, which is a list of most of Britain's distinctive registration numbers and their owners. Here you can discover that TAXI belongs to a Basingstoke taxi proprietor, COMIC is on Jimmy Tarbuck's Rolls-Royce, RAD10 is on Bob Danvers-Walker's Mini, CUR10 is on an antique dealer's car, and so on. Other parts of the book date the issue of any registration combination and state its issuing authority.

Most young car-spotters will be familiar with the excellent *Observer's Book of Automobiles*, a pocket-sized book with details of all current production cars which is edited each year by L. A. Manwaring. From the same publisher comes a fascinating reference



work, the *Observer's Fighting Vehicles Directory, World War 2*. War machinery is now becoming valuable, and this 350-page book sets out all known types of vehicles, country by country, sorting out the Jeeps from the Beeps, the Weasels from the Kübelis and the Dingos from the DUKWs. Combat vehicles, trucks, buses, field artillery tractors, motorcycles, cars and utilities are all here, from

Japan, Italy, America, Russia, Germany and the British Commonwealth. This unique book is the result of 20 years of research and collecting material on fighting vehicles by a Dutchman, Bart Vanderveen.

Car Numbers. By Noel Woodall, publ Garnstone Press, 59 Brompton Rd, London SW3. 9½ ins by 7½ ins. 266 pp. £2

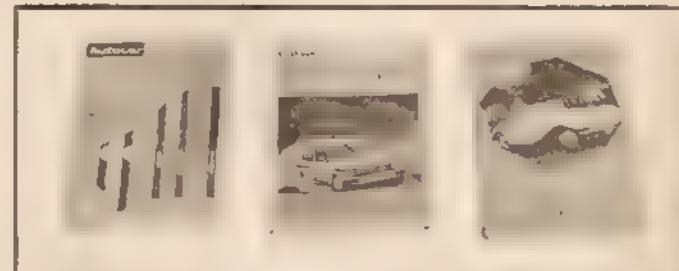
Observer's Book of Automobiles. Ed L. A. Manwaring, publ Frederick Warne, Chandos House, Bedford Court, Bedford Street, Strand, London WC2. 5½ ins by 3½ ins. 288 pp. 7s.

Observer's Fighting Vehicles Directory, World War 2. By Bart H. Vanderveen, publ Frederick Warne, Chandos House, Bedford Court, Bedford Street, Strand, London WC2. 5½ ins by 7½ ins. 340 pp. £1 5s.



Edwardiana is valuable these days, and lovers of the peculiarities of the early days of motoring will love *Some Early Motoring Advertisements* by Roy Chambers. In all there are 60 pages of reproductions from pre-First War publications extolling the virtues of cars, gadgets, tyres, petrol and other bits and pieces.

The *AUTOSPORT Book of Road Tests* reproduces 45 road tests from the pages of this magazine over the past 18 months, almost all of them by John Boister, covering such varied machinery as the Jaguar XJ6, Honda N600, Ford GT40, NSU Ro80, AC 428, Ford Capri, Rolls-Royce Silver Shadow and Lotus 7S. At 6s this 128-page annual, a welcome revival of the old High Performance Cars, is



excellent value. *Motor's annual of 1969 Road Tests* costs 3½ times as much, but in its 288 pages are 53 of their very detailed tests of a wide range of cars. The fastest was the Chevrolet Stingray (145.7 mph); the most accelerative to 50 mph the AC 428 (4.6 secs); the most economical the Honda N600 (41.7 mpg).

The first project of the Jim Clark Foundation was a very erudite investigation into the effects of fitting aerofoils to racing cars; shortly before the Aerofoil Research Report was published aerofoils were drastically limited in size, but the facts and figures obtained in the MIRA wind tunnel, relating to loads of aerofoils on suspension, the behaviour of aerofoiled cars in close company at high speeds, drag coefficients and so on are undoubtedly of considerable scientific interest, as very little research had been carried out in this direction before. Copies of the 28-page report are available from the Foundation for two guineas, the proceeds going to the foundation.

continued on page 39

CAR RACE DAY WITH JOHN



JOHN GOT

CHIEF CONSTABLE OF NORTHANTS AND
VICE-CHAIRMAN OF THE R.A.C. COMPETITIONS
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1967 M.G.B. ROADSTER in Trafalgar blue Overdrive, wire wheels, radio, burglar alarm Cinturato tyres	£745

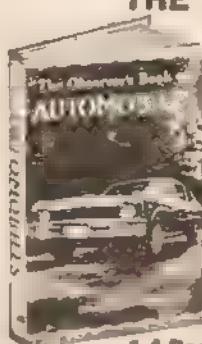


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SPRINT SPEED HILLCLIMBS AND SPEED TRIALS IN BRITAIN 1899-1925

by T. R. Nicholson

Published by
DAVID & CHARLES
Newton Abbot, Devon

Hillman Imp owners who do their own servicing, and especially those who prepare their cars for rallying, sprints and races, or just fast road work, will find a lot of useful gen in T. C. Millington's *Hillman Imps—Tuning, Overhaul and Servicing*. An almost legendary one-make book is *Tuning and Maintenance of MGs* by Philip Smith, who sadly died last month. This book was first published in 1952, and went through various reprints and revisions before going out of print completely for ten years. The publishers, Foulis, have now reintroduced it, and it covers all examples of the breed from 1929 to 1954.

Some Early Motoring Advertisements. By Roy Chambers, publ Bellona Publications, Hawthorn Hill, Bracknell, Berks. 12 ins by 9 ins 68 pp. £1 8s.

Autosport Book of Road Tests By John Bolster, publ Haymarket Press, 9 Harrow Rd, London W2. 11 ins by 8½ ins. 128 pp. 6s.

Motor Road Tests 1969 Series. Publ Paul Hamlyn, Hamlyn House, Feltham, Middx. 11½ ins by 8½ ins. 288 pp. £1 1s.

Aerofoil Research Report. Publ Jim Clark Foundation, 113 Fleet Street, London EC4. 11½ ins by 8½ ins. 28 pp. £2 2s.

Hillman Imps—Tuning, Overhaul and Servicing. By T. C. Millington, publ G. T. Foulis, 50A Bell St, Henley-on-Thames, Oxon. 8½ ins by 5½ ins. 160 pp. £1 16s.

Tuning and maintenance of MGs By Philip H. Smith, publ G. T. Foulis, 50A Bell St, Henley-on-Thames, Oxon. 8½ ins by 5½ ins. 196 pp. £1 16s.



Anyone embarking on a motor racing season with insufficient money to buy an expensive trailer for his racer will find some helpful hints in *Building and Towing a Trailer*, a useful little booklet which will also help people with boats, motorbikes, karts, camping equipment or lots of luggage to tow around. A 160-page pocket-book called *Sports Cars—A Complete Guide for Owners and Enthusiasts* has a potted round-up and some coloured drawings of sports cars from various countries and some hints on buying, driving and maintaining a sports car, and costs only 6s. There is a sketchy chapter on motor racing in the *Personna Year Book of Sports No 1*, which covers no fewer than 60 different sporting activities. I hope that the articles about the others are more authoritative than the 18 vague pages on motor racing and allied activities, but I do sympathise with the author's difficulty in having to explain motor racing in so short a space to readers who may know nothing about it.

Carburation 4. By C. H. Fisher, publ Chapman & Hall, 11 New Fetter Lane, London EC4. 8½ ins by 5½ ins. 316 pp. £3 5s.

Autocar Handbook. By J. R. Singham, publ Iliffe, 42 Russell Sq, London WC1. 8½ ins by 5½ ins. 276 pp. 15s (lmp), 25s (case).

Owning a Car. Publ Consumers Association, 14 Buckingham St, London WC2. 7½ ins by 4 ins. 216 pp. 15s.

Driving—the Ministry of Transport Manual. Publ Her Majesty's Stationery Office, 49 High Holborn, London WC1. 8½ ins by 5 ins. 224 pp. 12s 6d.

Low-Cost Car Repairs. By John Mills, publ Faber, 24 Russell Sq, London WC1. 8 ins by 5½ ins. 234 pp. 15s.

Building and Towing a Trailer. By B. J. Badland, publ Senior Publicity, Knowsley Chambers, 55 Knowsley St, Bolton, Lancs. 8½ ins by 5½ ins. 28 pp. 15s.

Sports Cars—a Complete Guide for Owners and Enthusiasts. By Francis Mortarini, Francis Leopold and Wallace Waterfall, publ Paul Hamlyn, Hamlyn House, Feltham, Middx. 8 ins by 4 ins. 160 pp. 6s.

Personna Year Book of Sports No 1. By Robert Martin, publ Pelham Books, 52 Bedford Sq, London WC1. 8½ ins by 5½ ins. 296 pp. £1 5s.



Finally, a work of fiction. This one is from Douglas Rutherford, who has written several who-dunnits with motor-racing backgrounds before, including *The Chequered Flag*, *A Shriek of Tyres* and *Grand Prix Murder*. A who-dunnit rarely tries to be realistic, but in fact Rutherford, considering that he must cater for readers who are not interested in motor racing, has done that bit of the background in *The Gilt-Edged Cockpit* very well, and anyone who knows the Nürburgring well—as the author obviously does—will enjoy the closing chapters. The story itself is no better than most of its kind, and the other major facet of the background—big takeovers and wheeling and dealing in industry—is less believable than the motor racing, but the book makes a reasonably absorbing light read, and of the various deaths that take place none happens in a racing car, for which one must be grateful.

The Gilt-Edged Cockpit. By Douglas Rutherford, publ Collins, 14 St James's Place, London SW1. 8 ins by 5½ ins. 256 pp. £1 1s.



Charles Fisher's authoritative text-book *Carburation* now runs to four volumes, and the fourth, recently published, deals with carburettor installation, mixture requirements, tuning, supercharging, current carburettor designs, and—a very topical subject—air pollution control. The *Autocar Handbook*, first published 60 years ago, has now appeared in a 23rd edition as a chunky softback; it covers in easily understood technical detail all basic aspects of the modern car—engine, transmission, suspension, body and electrics. It's a useful handbook for the intelligent layman. Intended for the

less knowledgeable—in fact the publishers, the Consumers' Association, say it's a book for the technically timid—is *Owning a Car*, which includes sound basic advice on learning to drive, buying and running a car and keeping on the right side of the law. *Driving*, published by HMSO, gives the official verdict on how we should all drive, and will certainly be of help to the novice. John Mills' handy little paperback, *Low Cost Car Repairs*, lucidly covers all jobs done by the do-it-yourselfer and is well illustrated.



Rallycross/Autocross



The two opposite-locking Boreham 1600 Escort TCs are those of Ove Andersson and Roger Clark, here at the hairpin.

THE Ford Motor Company entered two cars and four drivers for last Saturday's PN6/ITV World of Sport rallycross at Cadwell Park, and succeeded in taking the first four places overall. Competition manager Stuart Turner supplemented regular rallycross driver Barry Lee with rally men Timo Mäkinen, getting in some practice for next year, Ove Andersson, having his last drive for Ford England, and Roger Clark, previously prevented from appearing at this season's events due to ill-health, all sharing two Escorts used on the RAC.

Pitted against this galaxy of talent British Leyland fielded two Cooper Ss for John Rhodes and John Handley, and one of the RAC Rally Triumph 2500 PIs for Andy Cowan. Rootes' hopes as usual were in hands of Peter Harper in his Imp; however, as the event proper was being run to 1970 Appendix J Groups 1 to 4, Harper's car was not eligible and had to run in a separate event, held concurrently with the main event, for clubmen's cars complying to RAC Vehicle Regulations. As it happened, the Imp had yet another driveshaft failure anyway.

As it had been known for some time that the event proper would not be open to the usual G6 cars, a large number of drivers went to a lot of trouble to ensure that their cars complied with the regulations, including replacing all lightened body panels with the standard items or

else putting their racing engines into roadgoing cars. Despite fairly stringent scrutineering, one of two non-eligible fish managed to slip through the net, but all those finishing in the top ten were fair and square.

The only other works car was the actual RAC winning Lancia Fulvia, driven on this occasion by Tony Fall. The usual horde of privateers were present, including Rod Chapman in Jeff Uren's ex-Mick Brown rally Escort, which also saw service in 1968 as one of the PN6 autocross cars. Other notable Fords were those of Peter Warren, in Barry Lee's RAC Escort, Pip Corrotte in David Johnson's Escort, and David himself in the ex-Leespeed Zodiac Mk 4, which was a real handful in the conditions.

BL were as usual privately represented by a horde of Ss, including Brian Chatfield in a specially-built-for-the-occasion version, Jeff Williamson in John Foden's rally car, Tim Baker, John Boulden, Gerry Braithwaite, Norman Harvey, and Mike Hill in his road car. Just to add a bit of variety for the day Hans Kok, the Dutch champion,

was presented with his standard NSU TT; Hans intends to follow the Dutch trend of taking rallycross very seriously by building a full-race version for next year's series. John Taylor stayed faithful to Volvo with his road car.

Notable non-starters included John Sprinzel's works Datsun, Roy Edwards in his Escort, Phil Cooper, who had done his car no good on the RAC, and the attractive Micki Vandervell, who was to have driven Paul Emery's Imp; Paul was driving it himself.

The day's proceedings opened with virtually a full-scale blizzard, so the organisers put the competitors into the existing paddock as the hill to the one normally used for rallycross was unclimbable. As soon as this had been sanded, and also the rest of the tarmac on the course, the entire entry went out for a six-lap procession to bed down the circuit and help break up the ice. This "guided tour" was later deemed to be official practice, and the event started just after 1 pm. Obviously earlier cars were running at a big disadvantage and this showed



Tony Fall's Lancia slips inside John Heppenstall's Escort at the hairpin as Andrew Cowan backs off in the Triumph 25 PI.

club news

up in the times recorded; for example, by the fourth runs times had come down by over 20 secs.

The first run saw Handley in the works S just pip Jeff Williamson, with the Escort of John Brundie nearly 1 min behind. When Timo went out to do his first run the pattern for the day became obvious: last off the line, he ploughed through into the lead at the hairpin, pulling steadily away from the bunch throughout the run. Besides his mastery of both the car and the conditions some credit must go to the special Goodyear snow tyres he was using: obviously the time spent earlier in the week by Stuart Turner and Hannu Mikkola tyre testing in Lapland was not wasted. Incidentally, BL were using a similar tread pattern produced by Dunlop, but these were only available for 10 ins wheels.

The next Ford display featured Clark versus Andersson, and the side-by-side stuff through the cutting was a display of rallycross at its best, Andersson just getting the verdict by 0.5 sec. The next race saw Chapman trying his utmost to stay with Rhodes, only to be taken by Chatfield, who very nearly caught Rhodes at the flag.

As the Ford drivers were returning to London for the annual Boreham mechanics' dinner, they were put out in quick succession, all putting up demonstrations of superb sideways control in the treacherous conditions. Clark eventually set BTD with a sizzling 3 m 13.8 s, as compared with the fastest Mini time of 3.25.4 set up by Rhodes on his last run.

By the end of the day several cars were somewhat the worse for wear, Baker's engine having seized for the second time this season, and poor Williamson having a driveshaft break as he finished his second run; he rushed to fit a new one, just

made it in time for the last run of the day, and then holed a piston as he left the start.

In the abominable conditions the Kentish Border CC and Cadwell C & KC organisers did a good job in getting the runs complete before darkness fell. Whether or not the decision to run the meeting to national open status and thus limit eligibility was questioned by a few, but the pleasure given to many seeing the demonstration of snow driving by a Finnish maestro should have outweighed a lot of the grumbles. Timo thoroughly enjoyed his first taste of rallycross, and when asked what he thought of the sport told clerk of the course Bud Smith, "You should start 16 cars for 10 laps, with the slowest at the front." Ice-racing on grass, perhaps?

JOHN FODEN.

Overall: 1, T. Makinen (1.6 Ford Escort TC), 9 m 55.6 s; 2, R. Clark (1.6 Ford Escort TC), 9 m 57.4 s; 3, B. Anderson (1.6 Ford Escort TC), 9 m 58.0 s; 4, B. Lee (1.6 Ford Escort TC), 10 m 9.8 s; 5, J. Rhodes (1.3 Mini-Cooper S), 10 m 19.5 s; 6, J. Boulder (1.3 Mini-Cooper S), 10 m 38.6 s; 7, B. Chatfield (1.3 Mini-Cooper S), 10 m 39.0 s; 8, R. Chapman (1.6 Ford Escort TC), 10 m 39.4 s; 9, A. Fal (1.6 Lancia Fulvia Rallye HF), 10 m 40.0 s; 10, J. Handley (1.3 Mini Cooper S), 11 m 0.4 s. Fastest run 1: Makinen, 3 m 17.4 s. Run 2: Andersson, 3 m 18.6 s. Run 3: Clark, 3 m 13.8 s.

● It is now probable that there will be no more ITV-television 1969/70 rallycross events after Croft later this month.

● With conditions vastly improved thanks to an overnight thaw, Brian Chatfield in his Cooper S won Sunday's clubmen's rallycross at Cadwell from the Scottish PNE autocross champion, Stuart Brown, in a similar car. Pip Carrotte, reverting to his usual S in place of the Escort he had used on Saturday, was third overall and in the class. Colin (Dan) Grewer in his fearsome and much-battered Volvo-engined Cortina GT took the class 2 honours by 27 secs from the ex-works development Sunbeam Stiletto of Bill Slockett; there

were no finishers in class 3 and no entries in class 4. Results:

BTD: 1, B. Chatfield (1.3 Mini-Cooper S), 4 m 14.0 s; 2, S. Brown (1.3 Mini-Cooper S), 4 m 23.0 s; 3, P. Carrotte (1.3 Mini-Cooper S), 4 m 27.0 s. Class winners: Chatfield, Grewer (1.8 Ford Volvo Cortina GT Mk 1), 15 m 8.0 s; no other class finishers.

● This Saturday (December 6) the third round of the Wills Rallycross Championship is being run at Lydden Hill by TEAC, as usual televised by the BBC. Points leaders Brian Chatfield (Cooper S) and Barry Lee (works 1800 Escort TC) and John Rhodes (works Cooper S) are all entered, as are John Handley and Jeff Williamson in two more works Minis, Rod Chapman (Jeff Uren Escort), Jim Wicks (Anglia) and Mini privateers Tony Skelton, Graham Craker, Hugh Weldon and Pip Carrotte. Peter Harper will have his Imp, Harper's protest at the last meeting, incidentally, has been rejected by the RAC. A second works Escort is entered, and it is possible that Stan Clark will pilot it; if not, he will have his own car. First runs are at 1 pm; the clubmen's event on Sunday, for which the two Boreham cars are also entered, starts at the same time.

● It is now confirmed that the 1970 Players No 6 National Autocross Championship will not go four-abreast; two cars only will start together. Four-abreast was considered too difficult to run under the current regs due to the lack of clubs who could organise such a meeting and also the scarcity of suitable venues.

● John Taylor's astonishingly versatile Volvo 123 GT, which has been seen in rallycrosses, autocrosses, hillclimbs, sprints and trials, is currently having its engine breathed upon by Harry Weslake, and it is hoped to boost the power up from 110 bhp to 180 bhp.

all crews bar a few were clean), through Dunning Village to SS3 at Hall of Aberuthven. Ian Milne was back on the ball again here, and he was fastest from Bob Watson/Hugh McNeill (Cortina GT) and Heggie/Philip. The cars then ran directly to the final stage at the old aerodrome circuit at Gask, and it was Milne/Thorburn again, with the Wilson/Knox Hunter second fastest by 4 secs from Watson/McNeill.

The final two selectives, up over the hill to Glenalmond and back and the infamous "Little Glenshee" road, complete with the final ford, were all that remained. On Glenalmond, no one found the ridiculous 30 mph average any problem, although on selective 9 Heggie ran out of petrol and dropped 170 marks, a costly mistake.

The rally final control was at the Tay Motel in Perth, where a good breakfast and results were available. Ian Milne/Jim Thorburn had had a very clean run overall, but the results board showed that some of the "stage rallyists" needed a little reminder as to what a romper was.

JIMMY RAE

1, I. Milne/J. Thorburn (Mini-Cooper S), 102 pens, D. Black/R. Finlay (Volvo), 207, 3, J. Wilson/I. Knox (Hillman Hunter-Holbay), 239 Novices: M. Rogerson/R. Ross (Vauxhall Viva GT) Players/Motor World Scottish Rally Championship, Final positions: 1, Donal & Heggie/John Philip (Ford Escort 1600 GT), 2, Bill Taylor/Ian McIver (Ford Escort TC), 3, George Forbes/Alan Anderson (Mini-Cooper S); 4, Jimmy Rae/Mike Maclennan (Ford Escort 1300 GT); 5, John Morrison/Stan Will (Ford Cortina GT); 6, Mike Hibberd/Ian McIver (Ford Escort TC); 7, Bob Watson/Hugh McNeill (Ford Cortina GT); 8, Dave McDonald (Hillman Hunter); 9, George Thomson (Ford Cortina GT); 10, Brian McKay/Kit Myers (Ford Escort 1300 GT).



Rallies

Mini wins last Scottish round

IT WAS perhaps a pity that the final 55 CC all-nighter of the season, the Moonless Rally, attracted a poor entry of only 25 crews, and that the hoped-for snow did not materialise, although very heavy rain over the few days before the rally had given the organisers headaches regarding the two fords to be tackled. However, as if by magic the rain ceased, only to be replaced by very icy roads. The entry was led by the new Scottish Rally Champion, Donald Heggie, with John Philip in his Escort 1600, and he was followed by David Black/Ross Finlay in

their much-used Volvo, Jimmy Wilson/Iain Knox (Holbay Hunter) and the brothers Smith from Cupar in a 998 Imp.

The first few sections to special stage 1, at Balmadity, contained an interesting variety of navigational problems, and at TC1 Heggie/Philip had already dropped 2 mins by TC2, I. McKenzie/R. A. Jackson (Escort TC) had collected a WD, a missed code, and a 2 mins lateness penalty. The first selective at Glen Prosen was cleaned by all but three of the crews.

SS1 was a farm road about two miles in length, and immediately the Ian Milne/Jim Thorburn Cooper S took the lead by 1 sec from the Heggie/Philip Escort, which was in turn 4 secs in front of the McKenzie/Jackson Escort TC.

The crews made their way back towards Dundee via selective 3, at Hill of Finavon, and again only three crews lost time on this one. The petrol halt was in Dundee, prior to the cars crossing the Tay River and into Fife for the bulk of the remaining stages and another six selectives.

SS2, Pitlochie, was similar to the previous one, and although it was badly flooded in parts Ron and Dave Smith's Imp ran through very quickly for only 14 secs over bogey, with Milne/Thorburn on 16, and Heggie/Philip on 19. The crews moved immediately onto selective 5, at Pituncarty, where, only two cars collected penalties. The route then wound its way over the well-used "Path O Condie" and Pathstruie roads, making up selectives 6 and 7 (again

club news

Pierson/Francis best Icebreakers

ESCORT TC crew Frank Pierson and Colin Francis spiked their way through the snow and, more particularly, black ice of North Wales last Saturday night to win the Mini Se7en C Icebreaker Rally. They were using the RAC Rally car belonging to J. C. Withers.

With two similar events on the same weekend, it was quite apparent that the majority of the full 120 entry was attracted by the very good sponsorship organised and backed by VIP Motor Sport Publications. Not only this, but VIP had also arranged a private bonus system with each of the cars entered with entries from such club "names" as John Bloxham, Richard Harper in their Escort, George Hill/Keith Wood in a Jolly Club Lancia, Bob Bean/Paul Stephens (Escort TC), Pierson/Francis, Will Sparrow/Nigel Raeburn (Cooper S), etc, etc, a hard-fought rally was ensured, provided a rally was to be run at all. For had it not been for some

very enthusiastic and hard working course marshals, who over the previous two days had had to make several route changes and much route checking to discover which of the glassy ice-covered roads were climbable, no event could have been run.

Of the early cars there were a few who were not on studs. Bob Bean's Escort was one and, as the cars headed south from the start at Llangollen, it was he who caused many of the early numbers to drop up to 20 mins between TCs 1 and 2, being unable to climb the hill out of TC 1. Many suffered similar fates and fewer than a dozen cars arrived at TC 2 less than 20 mins down. Second car away, the Hill Wood Fulvia managed to climb the hill studless but by TC 11 they had already begun to cut controls, eventually collecting seven fails. They had, however, completed selective 1, on which Ian Rodger/Neil Wilson (Cooper S) had gone quickest, just 4 secs in front of Pierson/Francis, with Bernard

Banning/A. Forryan remarkably only a further second behind them with their Lotus Cortina.

First to fall foul of mechanical failure was the S of Sparrow/Raeburn, who had yet another diff break when leading Pierson by 1 min at TC 15.

At Llansilin the cars had to be rerouted through the village to avoid the deep ford into Coed Cochion.

By the half way halt near Llanfair Caereinion Pierson was the only car to have visited every control, a very creditable effort; he managed to stay clear of fails in the second half, also. With only one fail gained at TC 9, Rodger/Wilson were in second spot, John Bloxham having now fallen by the wayside, also apparently suffering from a broken diff. Hill/Wood now lay fifth behind the Escort of Ian Harwood/Don Barrow and the studless Cooper S of Gwyn Pritchard/Barry Hughes. Pritchard and Hill had now collected five fails each, and Hill's Lancia suffered a broken throttle cable just into the second half, this eventually necessitating cutting two further controls; they forfeited fifth place to Richard Milner/Fred Rosenfeld with their Sprite.

Unfortunately for Frank Pierson, the selective 2-times were scrubbed after a protest; Frank had hoped for the cash award as well, being 4 mins up on Ian Rodger on this long one round the hills just north-west of Llangollen.

The rally also finished at Llangollen, where breakfast was taken at the Hand. The results team, which had been so quick to display half-way positions, now broke down and it was four long hours before the provisional results (wrong as they were) were eventually announced; a very disappointing anti-climax to what had been a really first-class event.

HUGH BISHOP.

1. F. Pierson/C. Francis (Ford Escort TC), 45.03 mins; 2. 1. Rodger/N. Wilson (Mini-Cooper S), 59.56; 3. 1. Harwood/D. Barrow (Ford Escort TC), 52.0; 4. G. Pritchard/B. Hughes (Mini-Cooper), 78.21.
Semi-experts: W. Jones/C. Power (Mini-Cooper) Novices: C. Edwards/D. Evans (M. n.).



The Cooper S of Paul Mellor/Tony Bailey rounds the hairpin just below Mynydd Lledrod during the VIP Icebreaker



Three tie in Silverstone series

ONE could be forgiven for thinking that a sprint would be small beer compared to the race meetings organised by the most

regular of clubs at Silverstone, but the NSCC brought an excellent entry, excitement and no small amount of comedy to their event in the Silverstone Sprint Championship on November 23.

Standard saloons up to 1800 cc were amalgamated, and Steve Muir in his 998 Mini-Cooper (3 m 5.8 s) was just able to overcome a strong challenge from the similar car of David Ball, which had been quicker on the first runs (3:6.0). The 850 cc modified saloon class was still poorly supported, and Geoff Gilkes had it all his own way in his well-known FM7 car, the only one to get below the 3-min mark with 2:46.6, nearly 20 secs quicker than his nearest rival. The 1300 modified saloons provided much more competition and, having been within half a second of each other on their first runs, Anthony Kopieczeck (2:36.4) just managed to pull ahead of Bob Furness (2:36.6) in his similar 1293 Cooper S on the second efforts. Robbie Gordon has forsaken Cobras and big Healeys and was seen hurling his ex-Ron Mason Don Moore-tuned S to good effect to collect third spot, 1 sec behind. The big saloon class brought the usual battle between Trevor Clapton's 1865 Anglia and

Albert Betts' Jaguar, but this time Peter Shelton had decided that he wasn't playing any more and stormed off to win the class with his Cortina GT, leaving Clapton 1 sec behind at 2:29.4. Wridgeway Horton got the better of Betts for third place, stuffing the big maroon Jaguar round in 2:31 dead, while Albert had only got his wet tyres with him and was a faintly peeved fourth on a dry track with 2:33.8.

Andy Belcher once again polished off the small prod sports car class in his Sprite (2:30.2) leading Graham Ketley's Midget by 16 secs, and Bob Shellard in his fast but rather hairy MGB (2:30.8) showed the way in the 2-litre section to newcomer Nigel Bryant's similar car by 7 secs, followed by Nick Amey's Elan (2:40.2). The big class was of course Ian Richardson's without dispute (2:15.4), this time followed by Chris Mayman in Vic Hassall's 4.7 Cobra (2:26.0) and Cyril Smedley, as quick as usual in his white Plus 8 Morgan (2:30.2).

John Anstice-Brown (Rejo) won the class for 1150 sports-racing and GT cars by a clear 10 secs from John Watson's Lorelei Mk 2 and Bluebellie Gibb's Lola Mk 1, the 1600 class going as ever to John

AUTOSPORT, DECEMBER 4, 1969

club news

Abbott (U2 Mk 8) by a similar margin over Hugh Wilson's similar U2, which squeezed into second spot by 0.2 sec ahead of Gordon Howie's quick Lotus 7. Ken Wilson beat the Chevrons of Mike Richardson (2:16.2) and Lord Angus Clydesdale (2:16.4) by a couple of seconds with his mighty Lotus 30 in the big class, but his chances of BTD were taken away by the presence of John Markey in the Falken Racing F1 Cooper-Maserati, which howled round in the single-seater class in 2:5.6, thus gaining that award and leaving Len Gibbs the class pot in his F3 Brabham BT21 some 15 secs behind.

Two runners in this class had an unfortunate accident on the first runs. Graham Eden's Chevron-FVA B10 had left the line, and it was Albert Rodgie's turn to start in the big Lotus-Chevy 21 when flames came out of the front carb. Lou Wooster stuffed his hat over it and smothered the flames, but Eden shot through on to his second lap just after the Lotus got away at last, and lost the lot after passing Rodgie coming out of Becketts; the two cars collided, the Lotus rolling, but luckily no one was hurt.

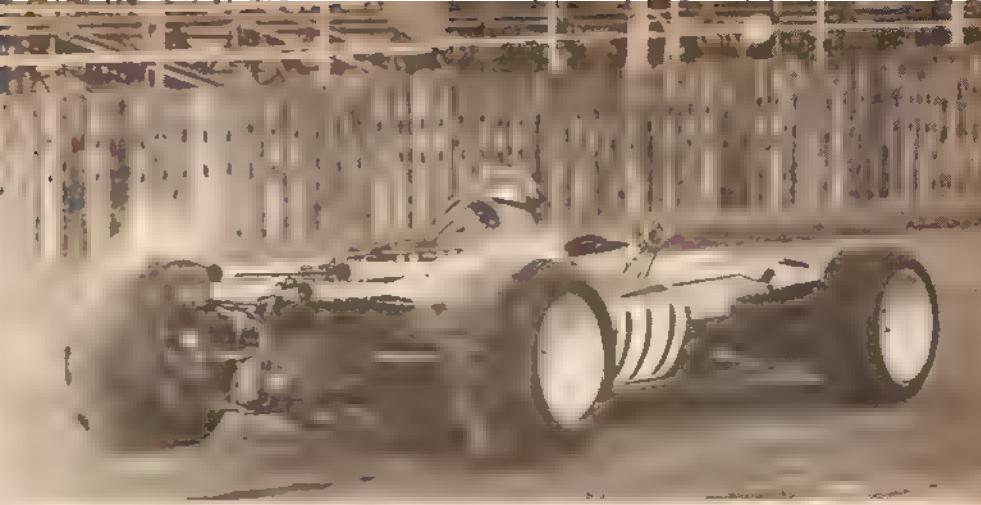
ROBIN REW.

BTD: J. Markey (F1 Cooper-Maserati T86 V12), 2 m 5.6 s. Class winners: S. Muir (1.0 Mini-Cooper), 3 m 5.8 s; G. Gibbs (EGO Mini), 2 m 48.6 s; A. Koplenack (1.3 Mini-Cooper S), 2 m 36.4 s; P. Shelton (1.7 Ford Cortina GT), 2 m 28.4 s; A. Belcher (1.3 Austin-Healey Sprite), 2 m 30.2 s; R. Shellard (1.9 MGB), 2 m 30.8 s; I. Richardson (5.4 AC Cobra), 2 m 15.4 s; J. Antcliff-Brown (1.1 Reliant-Ford Mk 8), 2 m 23.2 s; J. Abbott (1.6 U2-Ford Mk 8), 2 m 20.2 s; K. Wilson (4.7 Lotus-Ford 30 V8), 2 m 14.0 s; L. Gibbs (F3 Brabham-Lucas MAE BT21), 2 m 20.6 s.

● A week's indifferent weather made the job of organising the Duckhams Challenge Trophy Trial, held at Normandy Hill, near Aldershot, on November 23, very tricky. Much replanning of hills was necessary and very efficiently carried out by Colin Weeks and his band of marshals from the Crane Valley MC. The trial was won by Angus Stewart in his Ford Popular, who by the end of the day had cleared 20 of the 32 hills attempted.

Overall results were determined by a percentage improvement over the average total set in the classes

Overall: 1, W. A. C. Stewart (Ford Popular), 0.32 per cent (total 35 pts); 2, R. Terring (Vauxhall Viva), 0.69 (74); 3, R. Langstone (Sunbeam Sto etto), 0.70 (17); 4, C. Weeks (Ford Popular), 0.71 (54). Class winners: V. J. Beauchamp (Mini-Cooper), 0.90 (121); P. E. Johnson (Ford Cortina GT), 0.90 (121); P. D. Cornwall (MGA), 0.82 (42); and Langstone



John Markey spins the rear wheels of the Falken Racing Cooper-Maserati as he heads for BTD at the NSCC's Silverstone sprint.

● Last Saturday's sprint at Silverstone, scheduled to be the final round of the championship, was shortened drastically because of the weather and does not count for championship points, so the NSCC's event the previous week was the last round and Andy Belcher, John Abbott and Ian Richardson share the title. Snow and ice covered the circuit, and although the hard-working SODC marshals used 60 cwt of salt and plenty of shovels to clear part of the track, many competitors went home without competing, either because of the late starting or because their cars were not suited to the short section of the circuit chosen. The remaining cars started from the start/finish line, taking Woodcote the wrong way and going up the straight towards Becketts before rounding an artificial hairpin and returning via

Woodcote to the finish. The meeting was held in sunshine, so those that stayed enjoyed themselves, and BTD was put up by Maurice Gates in his TVR Tuscan, just 0.2 sec ahead of Belcher's Sprite. Abbott once again won his class as well as Belcher.

BTD: M. M. Gates (4.7 TVR-Ford Tuscan V8), 1 m 39.0 s. Class winners: 1. Patterson (1.2 Vauxhall Viva), 1 m 41.2 s; S. Fairchild (3.6 Jaguar Mk 2), 1 m 40.0 s; D. Faller (1.0 Mini-Cooper), 1 m 38.4 s; G. Grace (1.8 Riley 15/5), 1 m 35.8 s; A. Belcher (1.3 Austin-Healey Sprite), 1 m 30.2 s; R. Sheard (1.9 MGB), 1 m 33.2 s; P. Channon (4.7 AC Cobra), 1 m 37.0 s; J. Abbott (1.6 U2-Ford Mk 8), 1 m 31.0 s; W. Hemming (1.6 Gentry-Ford G4 t/c), 1 m 39.2 s; F. Lockhart (3.0 Rover 1000), 1 m 59.8 s. Ladies' award: Mrs. S. Gibbs (1.1 Lola-Climax MK 1).

● Unofficial final positions in the Silverstone Sprint Championship are as follows:

1. Richardson; Abbott and Belcher, 12 pts; 6. Gibbs, 10.5 Muir and T. Clapton (1.9 Ford Anglia); 8. 7. A. Beta (3.8 Jaguar Mk 1); C. Smedley (3.5 Morgan Plus 8); Shelton, Wilson and Gibbs.

Sprite wins Kent & Sussex

In overcast weather, this year's Kent and Sussex Trial, organised by the Tunbridge Wells MC on November 23, provided 51 competitors with a testing day of eight motor sporting events rolled into one. Each of the participating clubs were responsible for one site and one type of event, so the trial required consistent performances in each section of the sport.

The first event was a series of three trials hills laid out in long, wet grass by the Sporting VW C. Surprisingly, enough crews found the necessary concentration, but it was autocrosser Ernie Farncombe, navigated by Mick Swinney in an Imp, who took the lead.

Next came two long laps of the Bexley

MC & LCC's special stage in Mereworth Woods, on tarmac, but wet and covered with leaves in the vital places. Fastest was Rod Chapman (Escort TC), closely followed by Tony Johnstone/John Mossop (Mini-Cooper), John Taylor, crewed by a nervous Nick Ramus in his Volvo, Dave Nightingale/John Hubbard (Cooper S) and Dick Mullis/Trevor Maynard (Sprite).

A long drive south took the cars down to Ticehurst for the Sevenoaks & DMC's grass slalom, and the delicate touch of the non-autocrossers paid dividends, best times going to Karl Heim/Don Moss (850 Mini), Nightingale and Mullis. The Brighton & Hove MC had laid out a timed trial course at Isenhurst Manor, and heavy rain had left a very muddy start and a skating rink finish. Some crews went extremely well here, while others floundered, and the Minis of Johnstone and Nightingale deleted themselves from the leader board.

At Hartfield, the Maidstone & Mid-Kent MC put on two steep and tricky trials hills, and surprisingly best here was Johnstone, followed by the production car trial experts. Three autotests from the Eastbourne & DMC were also at Hartfield, and Nightingale took 2 secs from Johnstone and Mullis

Finally, the Kentish Border CC laid on three laps of Mike Cannon's stage, spectacular in mud, ooze and water; best performances here were made by Chapman, Johnstone and David West/Mike Day (Cortina).

NORMAN REDHEAD

Overall: 1, R. Mullis/T. Maynard (Austin-Healey Sprite); 2, A. Johnstone/J. Mossop (Mini-Cooper); Class winners: D. Nightingale/J. Hubbard (Mini-Cooper S); P. Cook/R. Young (Ford Anglia); J. King/Mrs. S. King (Austin-Healey Sprite); M. Read/K. Read (NSU). Club team: Eastbourne & DMC



David Freeth in his immaculate Singer Le Mans went very well in the Duckhams PCT at Normandy Hill.

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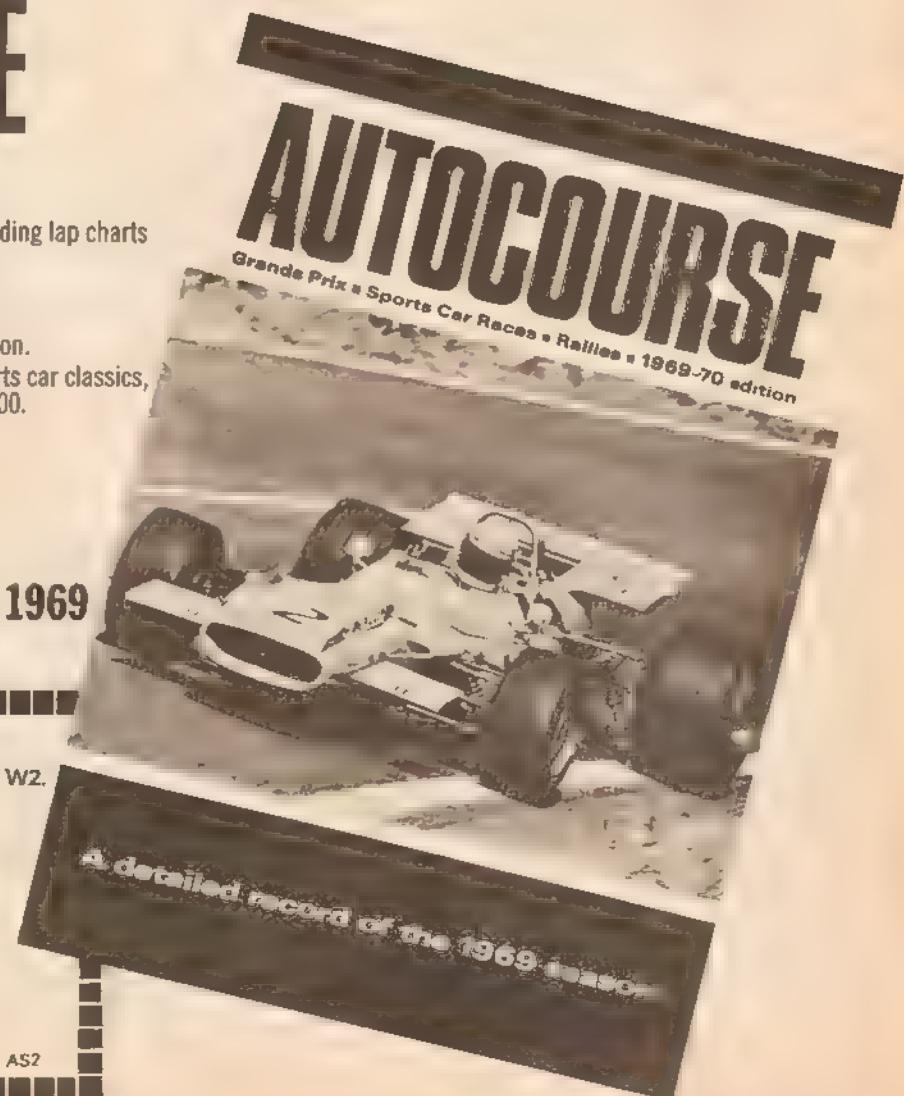
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